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Letter of Transmittal

Attention:	Ms. Karen Kirchner (USEPA) <u>Mr. Brian Conrath (IEPA)</u>	Date:	<u>September 6, 2018</u>
<hr/>			
Project reference:	<u>ILD981000417</u>	Project number:	<u>60562097</u>

We are sending you the following:

Number of originals:	Number of copies:	Description:
1	1	Second Quarter 2018 GMZ Monitoring and System Performance Report

Enclosed please find the Second Quarter 2018 GMZ Monitoring and System Performance Report for UTC Aerospace Systems Plants 1/2 Facility, Area 9/10 Remedial Action, Southeast Rockford Groundwater Contamination Superfund Site, Rockford, Illinois.

Thank You.

Peter Hollatz, P.E.

cc: Mr. Scott Moyer, United Technologies Corporation
 Ms. Diane Bellantoni, UTC Aerospace Systems
 Mr. Jon Alberg, AECOM
 Project File



Prepared for:
UTC Aerospace Systems
Rockford, IL

Prepared by:
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Warrenville, IL
60562097
September 6, 2018

Second Quarter 2018 GMZ Monitoring and System Performance Report

UTC Aerospace Systems Plants 1/2 Facility
Area 9/10 Remedial Action
Southeast Rockford Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, IL 61104
ILD 981000417



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September 6, 2018

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Subject: Second Quarter 2018 GMZ Monitoring and System Performance Report
UTC Aerospace Systems Plants 1/2 Facility
Area 9/10 Remedial Action
Southeast Rockford Groundwater Contamination Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417
AECOM Project No. 60562097

Dear Ms. Kirchner and Mr. Conrath:

This Quarterly Groundwater Management Zone (GMZ) Monitoring and System Performance Report has been prepared by AECOM Technical Services Inc. (AECOM) on behalf of UTC Aerospace Systems (UTAS, fka Hamilton Sundstrand Corporation or HSC). In accordance with the approved March 2007 Operation, Maintenance, and Monitoring Plan (OM&M Plan) and the United States Environmental Protection Agency (EPA) letter dated April 15, 2011, providing approval for combining project reporting documents, this report contains a summary of the following: 1) GMZ groundwater monitoring data; 2) the Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system performance data; 3) the Phase 1 and Phase 2 AS/SVE system process air analytical data; 4) GMZ wells that contain contaminants of concern (COCs) above Preliminary Remediation Goals (PRGs); and 5) Quarterly Progress Report for Third Quarter 2018.

As approved in the April 15, 2011 letter from Timothy Drexler (EPA), interpretation of collected groundwater quality and system performance data will be included in the Annual GMZ Monitoring and System Performance Report submitted in March of the subsequent year. This quarterly report provides the current environmental data including: tables and figures summarizing the results of second quarter 2018 GMZ monitoring and AS/SVE system performance data, supporting field data sheets and laboratory analytical reports, and the Quarterly Progress Report covering the period from June 1, 2018, to August 31, 2018.

The objective of AS/SVE system operation is to treat leachate-impacted groundwater at the HSC Plants 1/2 (Site) property. The implemented remedy was specifically targeted to address an area of the Site where COCs were originally present in leachate/groundwater at concentrations that were two or more orders of magnitude greater than their PRGs. Though the treatment area was not fully defined when the 2002 Record of Decision (ROD) for Operable Unit 3 (OU3) was issued, the entire Site was identified/defined in the ROD as a “source location” within the larger established “Source Area 9/10” (Area 9/10) based on data collected prior to the ROD¹. The ROD further required that the Site remedy include the establishment of a GMZ for this “source location” (the Site) whose volume was defined by the Site property boundaries and a vertical limit of 45 feet below ground surface. Two Site GMZs, GMZ 1 (Site property north of railroad tracks) and GMZ 2 (Site property south of railroad tracks), were approved by the Illinois EPA in 2008. Monitoring wells within the Site GMZs are routinely sampled, and the groundwater analytical results are compared to OU3 PRGs to evaluate the effectiveness of the remedy.

During the second quarter 2018 reporting period, the following six GMZ well locations along the Site boundary contained COCs at concentrations above PRGs:

GMZ Monitoring Well ID	COC ^[1] Concentrations > PRG (Increase (+) or Decrease (-) from Previous Quarter)
GMZ01	PCE (-)
SMW04	PCE (-), Vinyl chloride (-)
SMW08	PCE (-)
SMW19	TCE (+)
PWW01	PCE (-)
PMW02	PCE (+), Vinyl chloride (+)

^[1] Trichloroethene (TCE), Tetrachloroethene (PCE)

The above-noted decreases/increases in concentrations represent a relative change in COC concentrations (above the PRG) between the two most recent quarters of data. Such changes should not be viewed as an indication of a trend without further statistical evaluation.

While PRGs are used to assess on-going remedy effectiveness at the Site, the continued operation of the AS/SVE remedy will be dependent on the attainment of Alternate Cleanup Levels (ACLs) at the downgradient Site GMZ boundary. COC ACLs have not yet been established/approved for the Site, but the ACLs will represent the maximum allowable concentration at the Site boundary that will not result in a COC exceedance of a PRG at the Area 9/10 boundary downgradient of the Site.

¹ See EPA Superfund Record of Decision Southeast Rockford Ground Water Contamination, 2002. EPA/ROD/R05-02/077 2002.

Achieving ACLs at the downgradient Site boundary will demonstrate that the Site is protective of human and environmental receptors at the downgradient Area 9/10 boundary, and that continued active remediation is no longer warranted. The downgradient Area 9/10 boundary is located at Harrison Avenue to the south and 6th Street to the west.

A Work Plan for the development of site-specific ACLs has been prepared by AECOM on behalf of HSC. The Work Plan was submitted to EPA and Illinois EPA on August 11, 2017. The Work Plan was prepared as agreed following the meeting between HSC, AECOM, EPA and the Illinois EPA at the HSC facility on May 8, 2017.

The formulation of ACLs is consistent with the attainment of the OU3 ROD Remedial Action Objective (RAO) for groundwater specified in the ROD² and the objectives analysis/Remedial Action Process Flow Diagram (RAPFD) developed and approved for use by the EPA and Illinois EPA at the Site. The RAPFD and the conditions for the performance of an objectives analysis and use of ACLs at the Site are provided in the Statement of Work attached to the HSC facility Consent Decree³ and included in subsequent approved Remedial Action Work Plan.

Please contact either of the undersigned with any questions you may have on the information provided.

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² The OU3 ROD RAO for groundwater media is to: "Prevent the further migration of contamination from the source area that would result in degradation of site-wide groundwater or surface water to levels in excess of state or federal standards, or that pose a threat to human health or the environment."

³ See the Statement of Work in Appendix C of the Consent Decree between Hamilton Sundstrand Corporation and the United States Environmental Protection Agency (Civil Action Number 08 C 50129), Section II.D.2, *Implementation of Remedial Action and Attainment of Performance Standards* (pages 9 and 10).

Attachments:

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Appendices

- Appendix A Second Quarter 2018 GMZ and Performance Monitoring Well Analytical Data
Appendix B Second Quarter 2018 Effluent Air Laboratory Analytical Reports
Appendix C Second Quarter 2018 Phase 1/Phase 2 AS/SVE System Operations Data Sheets
Appendix D Second Quarter 2018 Groundwater Sampling Data Sheets
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Tables

Table 1
Third Quarter 2017 to Second Quarter 2018 Groundwater Elevations
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

Well ID	Top of Casing Elevation (ft)	Depth to Groundwater (ft BTOC)	Groundwater Elevation (ft AMSL)						
		8/7/2017		12/11/2017		2/5/2018		5/1/2018	
MW07FGA	727.49	25.61	701.88	26.46	701.03	27.19	700.30	27.23	700.26
MW203	728.58	26.34	702.24	27.19	701.39	27.93	700.65	27.97	700.61
SMW01	729.71	28.29	701.42	29.38	700.33	30.06	699.65	30.17	699.54
SMW02	726.77	24.88	701.89	25.81	700.96	26.53	700.24	26.52	700.25
SMW04	728.51	27.45	701.06	28.65	699.86	29.29	699.22	29.30	699.21
SMW08	728.81	27.67	701.14	28.84	699.97	29.48	699.33	29.61	699.20
SMW19	728.49	26.51	701.98	27.28	701.21	28.14	700.35	28.20	700.29
SMW20	727.69	26.58	701.11	27.74	699.95	28.39	699.30	28.41	699.28
SMW21	727.25	26.10	701.15	27.16	700.09	27.88	699.37	27.90	699.35
GMZ01	731.41	30.23	701.18	31.39	700.02	32.05	699.36	32.09	699.32
GMZ02	728.76	27.77	700.99	28.96	699.80	29.62	699.14	29.61	699.15
GMZ03	728.22	27.18	701.04	28.35	699.87	29.00	699.22	29.00	699.22
GMZ04	726.84	27.73	699.11	28.54	698.30	27.23	699.61	27.22	699.62
BGW01	728.19	26.37	701.82	27.28	700.91	28.00	700.19	28.08	700.11
BGW02	728.81	26.85	701.96	27.74	701.07	28.45	700.36	28.48	700.33
BGW03	728.96	26.92	702.04	27.79	701.17	28.52	700.44	NM	NM
RAMW01	728.91	27.80	701.11	28.96	699.95	29.63	699.28	29.61	699.30
RAMW02	728.90	27.69	701.21	28.80	700.10	29.46	699.44	29.48	699.42
RAMW03	728.71	27.50	701.21	28.61	700.10	29.28	699.43	29.29	699.42
RAMW04	728.80	27.38	701.42	28.41	700.39	29.11	699.69	29.11	699.69
RAMW05	727.65	26.26	701.39	27.29	700.36	28.00	699.65	27.99	699.66
RAMW06	727.64	26.28	701.36	27.31	700.33	28.01	699.63	28.02	699.62
RAMW07	732.20	30.79	701.41	31.82	700.38	32.50	699.70	32.54	699.66
RAMW08	728.45	26.92	701.53	27.93	700.52	28.63	699.82	28.63	699.82
PMW01	728.88	27.89	700.99	29.09	699.79	29.73	699.15	29.73	699.15
PMW02	728.88	27.86	701.02	29.04	699.84	29.70	699.18	29.72	699.16
Ave. GW Elev. (ft AMSL)		701.33		700.30		699.68		699.65	

Notes:

NM = Not monitored

ft = feet

ft BTOC = feet below top of casing

ft AMSL = feet above mean sea level

All site well top of casing elevations re-surveyed on May 24, 2011.

RAMW04 riser was lowered due to ice damage that occurred during the 2013 winter. Well was resurveyed on July 1, 2013.

Table 2
Third Quarter 2017 to Second Quarter 2018 Groundwater Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride
Preliminary Remediation Goals (PRG) ^A				0.005 ^A	0.005 ^A	0.007 ^{b,c} ^A	0.7 ^A	0.005 ^A	0.07 ^A	0.1 ^A	0.2 ^{b,c} ^A	0.005 ^A	0.7 ^A	0.005 ^A	1.0 ^A	0.002 ^A
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GMZ01	HS SER-GMZ01-080717	7-Aug-17		0.0018	0.0020 U	0.0011	0.0071	0.0010 U	0.0028	0.0010 U	0.0059	0.0010 U	0.0010 U	0.0137 ^A	0.0010 U	0.0010 U
	HS SER-GMZ01-121217	12-Dec-17		0.0046	0.0020 U	0.0010 U	0.0071	0.0010 U	0.0020	0.0010 U	0.0120	0.0010 U	0.0010 U	0.0832 ^A	0.00025 J	0.0010 U
	HS SER-GMZ01-020718	7-Feb-18		0.0013	0.0020 U	0.0010 U	0.0077	0.0010 U	0.0017	0.0010 U	0.0049	0.0010 U	0.0010 U	0.0255 ^A	0.0010 U	0.0010 U
	HS SER-GMZ01-050118	1-May-18		0.00077 J	0.0020 U	0.0010 U	0.0086	0.0010 U	0.0011	0.0010 U	0.0020	0.0010 U	0.0010 U	0.0149 ^A	0.0010 U	0.0010 U
GMZ02	HS SER-GMZ02-080917	9-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.00074 J	0.0010 U	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ02-121417	14-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.00067 J	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	0.00081 J	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ02-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.00043 J	0.0010 U	0.0010 U	0.00035 J	0.0010 U	0.0010 U	0.00050 J	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ02-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.00055 J	0.0010 U	0.0010 U	0.00047 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
GMZ03	HS SER-GMZ03-080917	9-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-080917	9-Aug-17	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00034 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-121417	14-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0038	0.0010 U
	HS SER-DUP01-121417	14-Dec-17	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0033	0.0010 U
	HS SER-GMZ03-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00048 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-020818	8-Feb-18	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00046 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ03-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.00046 J	0.0010 U	0.0010 U	0.00026 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-DUP01-050218	2-May-18	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.00047 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
GMZ04	HS SER-GMZ04-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00064 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-GMZ04-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.00075 J	0.0010 U	0.00067 J	0.0010 U	0.0145	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
MW07FGA	HS SER-MW07FGA-080717	7-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.00026 J	0.0010 U	0.0010 U	0.0010 U	0.0013	0.0010 U	0.0010 U	0.00078 J	0.0010 U	0.0010 U
	HS SER-MW07FGA-121217	12-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.00036 J	0.0010 U	0.0010 U	0.0010 U	0.0019	0.0010 U	0.0010 U	0.00075 J	0.0010 U	0.0010 U
	HS SER-MW07FGA-020718	7-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00081 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-MW07FGA-050118	1-May-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	0.00062 J	0.0010 U	0.0010 U	0.0010 U
MW203	HS SER-MW203-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0024	0.0010 U	0.0010 U
	HS SER-MW203-121217	12-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0066 ^A	0.0010 U	0.0010 U
	HS SER-MW203-020818	8-Feb-18		0.00048 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0133 ^A	0.0010 U	0.0010 U
	HS SER-MW203-050118	1-May-18		0.00050 J	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0218 ^A	0.0010 U	0.0010 U
SMW01	HS SER-SMW01-080717	7-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U	0.0021	0.0010 U	0.0010 U
	HS SER-SMW01-121217	12-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	0.0020	0.00030 J	0.0010 U	0.0010 U
	HS SER-SMW01-020718	7-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0017	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW01-050118	1-May-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U
SMW02	HS SER-SMW02-080717	7-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00063 J	0.0010 U	0.0010 U	0.00063 J	0.0010 U	0.0010 U
	HS SER-SMW02-121117	11-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00061 J	0.0010 U	0.0010 U
	HS SER-SMW02-020718	7-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00060 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW02-050118	1-May-18		0.0010 U	0.0020 U	0.0010 U	0.00045 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00067 J	0.0010 U	0.0010 U
SMW04	HS SER-SMW04-080917	9-Aug-17		0.0056 ^A	0.0020 U	0.0011	0.0109	0.0010 U	0.0535	0.00040 J	0.0011	0.0010 U	0.0010 U	0.0097 ^A	0.0010 U	0.0145 ^A
	HS SER-SMW04-121217	14-Dec-17		0.0016	0.0020 U	0.0010 U	0.0020	0.0010 U	0.0061	0.0010 U	0.0069	0.0010 U	0.0010 U	0.0253 ^A	0.0010 U	0.0010
	HS SER-SMW04-020918	9-Feb-18		0.0018	0.0020 U	0.0010 U	0.0036	0.0010 U	0.0087	0.0010 U	0.0056	0.0010 U	0.0010 U	0.0241 ^A	0.0010 U	0.0036 ^A
	HS SER-SMW04-050318	3-May-18		0.0017	0.0020 U	0.00072 J	0.0055	0.0010 U	0.0069	0.0010 U	0.0043	0.0010 U	0.0010 U	0.0220 ^A	0.0010 U	0.0031 ^A

See next page for notes.

Table 2
Third Quarter 2017 to Second Quarter 2018 Groundwater Analytical Results - GMZ Wells
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2- Dichloroethene	trans-1,2- Dichloroethene	1,1,1- Trichloroethane	1,1,2- Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SMW08	HS SER-SMW08-080717	7-Aug-17		0.0036	0.0020 U	0.00061 J	0.0047	0.0010 U	0.0018	0.0010 U	0.0132	0.0010 U	0.0010 U	0.0464 ^A	0.0010 U	0.0010 U
	HS SER-SMW08-121217	12-Dec-17		0.0054 ^A	0.0020 U	0.0010 U	0.0036	0.0010 U	0.0075	0.0010 U	0.0157	0.0010 U	0.0010 U	0.0810 ^A	0.00076 J	0.0010 U
	HS SER-SMW08-020718	7-Feb-18		0.0016	0.0020 U	0.0010 U	0.0078	0.0010 U	0.0051	0.0010 U	0.0053	0.0010 U	0.0010 U	0.0451 ^A	0.0010 U	0.0010 U
	HS SER-SMW08-050118	1-May-18		0.00093 J	0.0020 U	0.0010 U	0.0079	0.0010 U	0.0013	0.0010 U	0.0034	0.0010 U	0.0010 U	0.0245 ^A	0.0010 U	0.0010 U
SMW19	HS SER-SMW19-080817	8-Aug-17		0.0163 ^A	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0080 J	0.0010 U	0.0010 U
	HS SER-SMW19-121317	13-Dec-17		0.0126 ^A	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00054 J	0.0010 U	0.00027 J	0.0010 U	0.0010 U	0.0097 J	0.00042 J	0.0010 U
	HS SER-SMW19-020818	8-Feb-18		0.0120 ^A	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.00092 J	0.0010 U	0.00027 J	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U
	HS SER-SMW19-050218	2-May-18		0.0156 ^A	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0017	0.0010 U	0.00038 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U
SMW20	HS SER-SMW20-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW20-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.00027 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
SMW21	HS SER-SMW21-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0014	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0046	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0049	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-SMW21-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0046	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
PMW01	HS SER-PMW01-080917	9-Aug-17		0.00054 J	0.0020 U	0.0010 U	0.00086 J	0.0010 U	0.0010 U	0.0010 U	0.0016	0.0010 U	0.0010 U	0.0024	0.0010 U	0.0010 U
	HS SER-PMW01-121417	14-Dec-17		0.00063 J	0.0020 U	0.0010 U	0.00071 J	0.0010 U	0.0010 U	0.0010 U	0.0018	0.0010 U	0.0010 U	0.0092 ^A	0.0010 U	0.0010 U
	HS SER-PMW01-020918	9-Feb-18		0.00049 J	0.0020 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	0.0010 U	0.0015	0.0010 U	0.0010 U	0.0086 ^A	0.0010 U	0.0010 U
	HS SER-PMW01-050318	3-May-18		0.00061 J	0.0020 U	0.0010 U	0.00066 J	0.0010 U	0.0010 U	0.0010 U	0.0015	0.0010 U	0.0010 U	0.0074 ^A	0.0010 U	0.0010 U
PMW02	HS SER-PMW02-080917	9-Aug-17		0.0011	0.0020 U	0.0010 U	0.0039	0.0010 U	0.0190	0.0010 U	0.0038	0.0010 U	0.0010 U	0.0145 ^A	0.0010 U	0.0124 ^A
	HS SER-PMW02-121417	14-Dec-17		0.0011	0.0020 U	0.0010 U	0.0027	0.0010 U	0.0168	0.0010 U	0.0042	0.0010 U	0.0010 U	0.0128 ^A	0.0016	0.0052 ^A
	HS SER-PMW02-020918	9-Feb-18		0.0013	0.0020 U	0.0010 U	0.0048	0.0010 U	0.0262	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0065 ^A	0.0010 U	0.0037 ^A
	HS SER-PMW02-050318	3-May-18		0.0013	0.0020 U	0.0010 U	0.0036	0.0010 U	0.0192	0.0010 U	0.0017	0.0010 U	0.0010 U	0.0085 ^A	0.0010 U	0.0059 ^A

Notes:

PRG Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)

b,c Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

^A Class 1 - Groundwater Remediation Objectives

Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

6.5^A Concentration exceeds the indicated standard.

c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

15.2 Concentration was detected but did not exceed applicable standards.

*

0.03 U The analyte was not detected above the laboratory estimated quantitation limit.

LCS or LCSD exceeds the control limits

0.50 U Laboratory estimated quantitation limit exceeded standard.

B The analyte was detected in the method, field and/or trip blank.

n/v No standard/guideline value.

H Sample was prepped or analyzed beyond the specified holding time

- Parameter not analyzed / not available.

J Indicates estimated value.

mg/L milligrams per liter

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

Table 3
Third Quarter 2017 to Second Quarter 2018 Groundwater Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	
Preliminary Remediation Goals (PRG) ^A				0.005 ^A _c	0.005 ^A _c	0.007 ^A _{b,c}	0.7 ^A	0.005 ^A _c	0.07 ^A _c	0.1 ^A _c	0.2 _{b,c} ^A	0.005 ^A _c	0.7 ^A _c	0.005 ^A _c	1.0 ^A _c	0.002 ^A _c	
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
RAMW01	HS SER-RAMW01-080917	9-Aug-17		0.00059 J	0.0020 U	0.0010 U	0.00082 J	0.0010 U	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	0.0055^A	0.0010 U	0.0010 U	
	HS SER-RAMW01-121317	13-Dec-17		0.00045 J	0.0020 U	0.0010 U	0.00057 J	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0042	0.0010 U	0.0010 U	
	HS SER-RAMW01-020818	8-Feb-18		0.00043 J	0.0020 U	0.0010 U	0.00048 J	0.0010 U	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	0.0030	0.0010 U	0.0010 U	
	HS SER-RAMW01-050318	3-May-18		0.00047 J	0.0020 U	0.0010 U	0.00061 J	0.0010 U	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U	0.0022	0.0010 U	0.0010 U	
RAMW02	HS SER-RAMW02-080917	9-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.00043 J	0.0010 U	0.0010 U	0.0010 U	0.00075 J	0.0010 U	0.0010 U	0.0017	0.0010 U	0.0010 U	
	HS SER-RAMW02-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.00063 J	0.0010 U	0.0010 U	0.0010 U	0.00060 J	0.0010 U	0.0010 U	0.0015	0.0010 U	0.0010 U	
	HS SER-RAMW02-020818	8-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.00072 J	0.0010 U	0.0010 U	0.0010 U	0.00074 J	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	
	HS SER-RAMW02-050318	3-May-18		0.0010 U	0.0020 U	0.0010 U	0.00072 J	0.0010 U	0.0010 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	
RAMW03	HS SER-RAMW03-080917	9-Aug-17		0.00036 J	0.0020 U	0.0010 U	0.00041 J	0.0010 U	0.0010 U	0.0010 U	0.00058 J	0.0010 U	0.0010 U	0.0010	0.0010 U	0.0010 U	
	HS SER-DUP02-080917	9-Aug-17	Field Duplicate	0.00035 J	0.0020 U	0.0010 U	0.00041 J	0.0010 U	0.0010 U	0.0010 U	0.00057 J	0.0010 U	0.0010 U	0.00096 J	0.0010 U	0.0010 U	
	HS SER-RAMW03-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00070 J	0.0010 U	0.0010 U	
	HS SER-DUP02-121317	13-Dec-17	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00076 J	0.0010 U	0.0010 U	
	HS SER-RAMW03-020818	8-Feb-18		0.00027 J	0.0020 U	0.0010 U	0.00045 J	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0013	0.0010 U	0.0010 U	
	HS SER-DUP02-020818	8-Feb-18	Field Duplicate	0.00044 J	0.0020 U	0.0010 U	0.00043 J	0.0010 U	0.0010 U	0.0010 U	0.0011	0.0010 U	0.0010 U	0.0012	0.0010 U	0.0010 U	
	HS SER-RAMW03-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.00049 J	0.0010 U	0.0010 U	0.0010 U	0.00032 J	0.0010 U	0.0010 U	0.00059 J	0.0010 U	0.0010 U	
	HS SER-DUP02-050218	2-May-18	Field Duplicate	0.0010 U	0.0020 U	0.0010 U	0.00043 J	0.0010 U	0.0010 U	0.0010 U	0.00031 J	0.0010 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	
RAMW04	HS SER-RAMW04-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.00024 J	0.0010 U	0.0010 U	0.0010 U	0.00035 J	0.0010 U	0.0010 U	0.00065 J	0.0010 U	0.0010 U	
	HS SER-RAMW04-121317	13-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.00061 J	0.0010 U	0.0010 U	
	HS SER-RAMW04-020718	7-Feb-18		0.00030 J	0.0020 U	0.0010 U	0.00054 J	0.0010 U	0.0010 U	0.0010 U	0.00080 J	0.0010 U	0.0010 U	0.00090 J	0.0010 U	0.0010 U	
	HS SER-RAMW04-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.00021 J	0.0010 U	0.0010 U	0.0010 U	0.00031 J	0.0010 U	0.0010 U	0.00051 J	0.0010 U	0.0010 U	
RAMW05	HS SER-RAMW05-080817	8-Aug-17		0.0019	0.0020 U	0.0010 U	0.0011	0.0010 U	0.0026	0.0010 U	0.0290	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW05-121217	12-Dec-17		0.00097 J	0.0020 U	0.0010 U	0.00057 J	0.0010 U	0.0012	0.0010 U	0.0133	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW05-020718	7-Feb-18		0.0030	0.0020 U	0.0010 U	0.0029	0.0010 U	0.0110	0.0010 U	0.0998	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW05-050218	2-May-18		0.00061 J	0.0020 U	0.0010 U	0.00058 J	0.0010 U	0.00083 J	0.0010 U	0.0123	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
RAMW06	HS SER-RAMW06-080817	8-Aug-17		0.0010 U	0.0020 U	0.00078 J	0.0017	0.0010 U	0.0020	0.0010 U	0.0604	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-121217	12-Dec-17		0.00045 J	0.0020 U	0.00080 J	0.0031	0.0010 U	0.0037	0.0010 U	0.0917	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-020718	7-Feb-18		0.00069 J	0.0020 U	0.0010 U	0.00078 J	0.0010 U	0.0016	0.0010 U	0.126	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW06-050218	2-May-18		0.0010 U	0.0020 U	0.00059 J	0.0031	0.0010 U	0.0035	0.0010 U	0.0757	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
RAMW07	HS SER-RAMW07-080817	8-Aug-17		0.00075 J	0.020 U	0.00075 J	0.0014	0.0010 U	0.0032	0.0010 U	0.0777	0.0010 U	0.0010 U	0.00085 J	0.0010 U</		

Table 3
Third Quarter 2017 to Second Quarter 2018 Groundwater Analytical Results - Performance Wells
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

				Trichloroethene (TCE)	Methylene Chloride (Dichloromethane)	1,1-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	Vinyl chloride	
Preliminary Remediation Goals (PRG) ^A				0.005 ^c	0.005 ^c	0.007 ^{b,c}	0.7 ^A	0.005 ^c	0.07 ^A	0.1 ^c	0.2 ^{b,c}	0.005 ^c	0.7 ^c	0.005 ^c	1.0 ^c	0.002 ^c	
Well	Sample ID	Sample Date	Sample Type	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
RAMW08	HS SER-RAMW08-080817	8-Aug-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	
	HS SER-RAMW08-121217	12-Dec-17		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW08-020718	7-Feb-18		0.0010 U	0.0020 U	0.0010 U	0.00023 J	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U
	HS SER-RAMW08-050218	2-May-18		0.0010 U	0.0020 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U

Notes:

PRG Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD)

^{b,c} Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

^A Class 1 - Groundwater Remediation Objectives

Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for

6.5^A Concentration exceeds the indicated standard at specified well; however, compliance with the standard is only applicable to GMZ wells.

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

15.2 Concentration was detected but did not exceed applicable standards.

Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater.

0.50 U Laboratory estimated quantitation limit exceeded standard.

B The analyte was detected in the method, field and/or trip blank.

0.03 U The analyte was not detected above the laboratory estimated quantitation limit.

J Indicates estimated value.

mg/L milligrams per liter

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated

n/v No standard/guideline value.

numerical value represents its approximate concentration.

- Parameter not analyzed / not available.

Groundwater monitoring wells located within the influence of active treatment systems yield groundwater sample data that is potentially biased by the treatment activities. This potential bias should be considered during evaluation of this data.

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/10/2009		159	53	140	13000	3.76E-02	140 U	0.00E+00	45000	9.67E-02	140 U	0.00E+00	910	1.91E-03	18000	3.79E-02	140 U	0.00E+00	940	3.38E-03	260	7.41E-04	8100	1.10E-02	140 U	0.00E+00
12/22/2009		372	124	140	980	2.84E-03	26 U	0.00E+00	11000	2.36E-02	26 U	0.00E+00	130	2.74E-04	7300	1.54E-02	26 U	0.00E+00	390	1.40E-03	41	1.17E-04	470	6.38E-04	26 U	0.00E+00
2/24/2010		1893	631	150	640	1.99E-03	6.0 U	0.00E+00	1900	4.37E-03	6.0 U	0.00E+00	28	6.31E-05	630	1.42E-03	6.0 U	0.00E+00	150	5.78E-04	24	7.33E-05	33	4.80E-05	6.0 U	0.00E+00
3/15/2010		2345	782	140	1100	3.19E-03	8.4 U	0.00E+00	2800	6.01E-03	8.4 U	0.00E+00	37	7.79E-05	1300	2.74E-03	8.4 U	0.00E+00	180	6.48E-04	30	8.56E-05	32	4.34E-05	8.4 U	0.00E+00
4/14/2010		2804	935	150	1400	4.34E-03	12 U	0.00E+00	4100	9.44E-03	12 U	0.00E+00	31	6.99E-05	1400	3.16E-03	12 U	0.00E+00	790	3.05E-03	86	2.63E-04	91	1.32E-04	12 U	0.00E+00
5/13/2010		3495	1165	140	590	1.71E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	13	2.74E-05	1100	2.31E-03	7.0 U	0.00E+00	300	1.08E-03	32	9.13E-05	10	1.36E-05	7.0 U	0.00E+00
6/21/2010		4430	1477	108	710	1.59E-03	8.6 U	0.00E+00	2600	4.31E-03	8.6 U	0.00E+00	16 J	2.60E-05	570	9.25E-04	8.6 U	0.00E+00	290	8.05E-04	30	6.60E-05	8.6 U	0.00E+00	8.6 U	0.00E+00
7/21/2010		5058	1686	140	480	1.39E-03	7.0 U	0.00E+00	2600	5.58E-03	7.0 U	0.00E+00	10	2.10E-05	630	1.33E-03	7.0 U	0.00E+00	710	2.56E-03	42	1.20E-04	7.0 U	0.00E+00	7.0 U	0.00E+00
8/23/2010		5784	1928	0	370	0.00E+00	8.2 U	0.00E+00	2400	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	540	0.00E+00	8.2 U	0.00E+00	500	0.00E+00	48	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00
9/23/2010		6523	2174	145	480	1.44E-03	7.2 U	0.00E+00	2000	4.45E-03	7.2 U	0.00E+00	7.2 U	0.00E+00	250	5.45E-04	7.2 U	0.00E+00	380	1.42E-03	31	9.16E-05	7.2 U	0.00E+00	7.2 U	0.00E+00
10/22/2010	Dup	7219	2406	140	390	1.13E-03	5.0 U	0.00E+00	1600	3.44E-03	5.0 U	0.00E+00	5.0 U	0.00E+00	160	3.37E-04	5.0 U	0.00E+00	240	8.64E-04	21	5.99E-05	5.0 U	0.00E+00	5.0 U	0.00E+00
10/22/2010		7219	2406	2600	7.53E-03	10 U	0.00E+00	960	2.06E-03	10 U	0.00E+00	120	2.53E-04	490	1.03E-03	10 U	0.00E+00	140	5.04E-04	49	1.40E-04	10 U	0.00E+00	10 U	0.00E+00	
11/15/2010		7794	2598	140	420	1.22E-03	4.3 U	0.00E+00	1700	3.65E-03	4.3 U	0.00E+00	4.3 U	0.00E+00	140	2.95E-04	4.3 U	0.00E+00	140	5.04E-04	16	4.56E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
12/22/2010		8508	2777	150	600	1.86E-03	4.2 U	0.00E+00	1600	3.68E-03	4.2 U	0.00E+00	8.5	1.92E-05	510	1.15E-03	4.2 U	0.00E+00	75	2.89E-04	11	3.36E-05	4.2 U	0.00E+00	4.2 U	0.00E+00
1/24/2011		9302	2975	170	360	1.27E-03	5.2 U	0.00E+00	1700	4.43E-03	5.2 U	0.00E+00	140	3.58E-04	5.2 U	0.00E+00	45	1.97E-04	8.6	2.98E-05	5.2 U	0.00E+00	5.2 U	0.00E+00		
2/25/2011		10071	3167	165	280	9.56E-04	4.0 U	0.00E+00	1600	4.05E-03	4.0 U	0.00E+00	4.5	1.12E-05	120	2.98E-04	4.0 U	0.00E+00	34	1.44E-04	7.4	2.49E-05	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	200	6.83E-04	6.3 U	0.00E+00	1900	4.81E-03	6.3 U	0.00E+00	6.3 U	0.00E+00	130	3.22E-04	6.3 U	0.00E+00	32	1.36E-04	6.4	2.15E-05	6.3 U	0.00E+00	6.3 U	0.00E+00
4/15/2011		11241	3460	160	180 J,B	5.96E-04	4.5 U	0.00E+00	1700	4.17E-03	4.5 U	0.00E+00	4.5 U	0.00E+00	110	2.65E-04	4.5 U	0.00E+00	43	1.77E-04	8.6	2.80E-05	4.5 U	0.00E+00	4.5 U	0.00E+00
5/19/2011		12061	3665	160	110	3.64E-04	4.3 U	0.00E+00	1100	2.70E-03	4.3 U	0.00E+00	4.3 U	0.00E+00	85	2.04E-04	4.3 U	0.00E+00	55	2.26E-04	8	2.61E-05	4.3 U	0.00E+00	4.3 U	0.00E+00
6/16/2011		12722	3830	170	150	5.27E-04	2.3 U	0.00E+00	730	1.90E-03	2.3 U	0.00E+00	2.8	7.15E-06	63	1.61E-04	2.3 U	0.00E+00	110	4.81E-04	12	4.16E-05	2.3 U	0.00E+00	2.3 U	0.00E+00
7/15/2011		13417	4472	170	140	4.92E-04	1.2 U	0.00E+00	390	1.02E-03	1.2 U	0.00E+00	2.2	5.62E-06	47	1.20E-04	1.2 U	0.00E+00	170	7.43E-04	14	4.85E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	150	5.27E-04	1.1 U	0.00E+00	210	5.48E-04	1.1 U	0.00E+00	2.1	5.37E-06	36	9.20E-05	1.1 U	0.00E+00	1							

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/10/2009		159	53	140	140 U	0.00E+00	140 U	0.00E+00	17000	2.38E-02	140 U	0.00E+00	560	1.12E-03	250	5.76E-04	1800	4.15E-03	470	1.08E-03	3800	4.79E-03	140 U	0.00E+00	2.25E-01	11.91
12/22/2009		372	124	140	26 U	0.00E+00	26 U	0.00E+00	1700	2.38E-03	26 U	0.00E+00	32	6.40E-05	26 U	0.00E+00	26 U	0.00E+00	100 U	0.00E+00	26 U	0.00E+00	4.67E-02	15.23		
2/24/2010		1893	631	150	6.0 U	0.00E+00	6.0 U	0.00E+00	130	1.95E-04	19	3.45E-05	6.0 U	0.00E+00	6.0 U	0.00E+00	6.0 U	0.00E+00	98	1.32E-04	370	6.20E-04	9.52E-03	20.06		
3/15/2010		2345	782	140	8.4 U	0.00E+00	8.4 U	0.00E+00	170	2.38E-04	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	8.4 U	0.00E+00	34 U	0.00E+00	8.4 U	0.00E+00	1.30E-02	22.02		
4/14/2010		2804	935	150	12 U	0.00E+00	12 U	0.00E+00	320	4.80E-04	14	2.54E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	50 U	0.00E+00	12 U	0.00E+00	2.10E-02	25.22		
5/13/2010		3495	1165	140	7.0 U	0.00E+00	7.0 U	0.00E+00	100	1.40E-04	12	2.03E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.10E-02	27.75		
6/21/2010		4430	1477	108	8.6 U	0.00E+00	8.6 U	0.00E+00	87 J	9.40E-05	10	1.31E-05	8.6 U	0.00E+00	8.6 U	0.00E+00	8.6 U	0.00E+00	34 J	3.31E-05	8.6 U	0.00E+00	7.86E-03	30.20		
7/21/2010		5058	1686	140	7.0 U	0.00E+00	7.0 U	0.00E+00	60	8.40E-05	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	7.0 U	0.00E+00	28 U	0.00E+00	7.0 U	0.00E+00	1.11E-02	32.52		
8/23/2010		5784	1928	0	8.2 U	0.00E+00	8.2 U	0.00E+00	38	0.00E+00	24	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	8.2 U	0.00E+00	53	0.00E+00	8.2 U	0.00E+00	0.00E+00	32.52		
9/23/2010		6523	2174	145	7.2 U	0.00E+00	7.2 U	0.00E+00	15	2.18E-05	17	2.99E-05	7.2 U	0.00E+00	7.2 U	0.00E+00	7.2 U	0.00E+00	29 U	0.00E+00	7.2 U	0.00E+00	7.99E-03	34.49		
10/22/2010	Dup	7219	2406	140	5.0 U	0.00E+00	5.0 U	0.00E+00	11	1.54E-05	7.1	1.20E-05	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	45	5.67E-05	5.0 U	0.00E+00	5.91E-03	35.86		
10/22/2010		7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	41 U	0.00E+00	10 U	0.00E+00	1.15E-02	37.16		
11/15/2010		7794	2598	140	4.3 U	0.00E+00	4.3 U	0.00E+00	12	1.68E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	5.73E-03	36.96		
12/22/2010		8508	2777	150	4.2 U	0.00E+00	4.2 U	0.00E+00	10	1.50E-05	5.3	9.63E-06	4.2 U	0.00E+00	4.2 U	0.00E+00	4.2 U	0.00E+00	16 NJ	2.16E-05	4.2 U	0.00E+00	7.08E-03	38.22		
1/24/2011		9302	2975	170	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	5.2 U	0.00E+00	21 U	0.00E+00	5.2 U	0.00E+00	6.28E-03	39.47		
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	5.48E-03	40.53		
3/18/2011		10573	3293	165	6.3 U	0.00E+00	6.3 U	0.00E+00	25 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	6.3 U	0.00E+00	25 U	0.00E+00	25 U	0.00E+00	5.97E-03	41.27		
4/15/2011		11241	3460	160	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	5.24E-03	42.15		
5/19/2011		12061	3665	160	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	3.52E-03	42.87		
6/16/2011		12722	3830	170	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	9.2 U	0.00E+00	3.12E-03	43.39		
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.5	3.09E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.4	1.13E-05	4.6 U	0.00E+00	2.44E-03	44.96		
8/22/2011		14324	4775	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	6.7	1.38E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	44 J,B	6.74E-05	4.5 U	0.00E+00	2.10E-03	45.59		
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	5.6	8.57E-06	4.5 U	0.00E+00	1.75E-03	45.93		
10/14/2011		15598	5199	160	0.74 U	0.00E+00	0.74 U	0.00																		

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																										
1/15/2014		28218	8651	160	100	3.31E-04	1.1 U	0.00E+00	30	7.36E-05	1.1 U	0.00E+00	1.3	3.13E-06	4.7	1.13E-05	1.1 U	0.00E+00	69	2.84E-04	9.1	2.97E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/14/2014		29432	8894	160	78	2.58E-04	1.1 U	0.00E+00	34	8.35E-05	1.1 U	0.00E+00	3.8	9.14E-06	6.1	1.47E-05	1.1 U	0.00E+00	30	1.23E-04	7	2.28E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																										
5/15/2014		29914	8990	160	95	3.14E-04	1.2 U	0.00E+00	32	7.86E-05	1.2 U	0.00E+00	1.9	4.57E-06	6	1.44E-05	1.2 U	0.00E+00	55	2.26E-04	6.8	2.22E-05	1.2 U	0.00E+00	12 U	0.00E+00
7/23/2014		31567	9321	160	160	5.29E-04	1.2 U	0.00E+00	41	1.01E-04	1.2 U	0.00E+00	3.6	8.66E-06	9.3	2.24E-05	1.2 U	0.00E+00	170	6.99E-04	18	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																										
9/16/2014		32432	9494	160	480	1.59E-03	2.2 U	0.00E+00	11	2.70E-05	2.2 U	0.00E+00	4	9.62E-06	8.7	2.09E-05	2.2 U	0.00E+00	14	5.76E-05	13	4.24E-05	2.2 U	0.00E+00	22 U	0.00E+00
11/14/2014		33847	9777	160	60	1.99E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.6	3.85E-06	3.6	8.66E-06	1.1 U	0.00E+00	50	2.06E-04	6.9	2.25E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																										
1/9/2015	Dup	33855	9778	160	86	2.85E-04	1.1 U	0.00E+00	20	4.91E-05	1.1 U	0.00E+00	1.1	2.65E-06	4.0	9.62E-06	1.1 U	0.00E+00	55	2.26E-04	8.2	2.67E-05	1.1 U	0.00E+00	11 U	0.00E+00
1/9/2015		-	-	160	84	2.78E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6	1.11E-05	1.2 U	0.00E+00	80	3.29E-04	8.6	2.80E-05	1.2 U	0.00E+00	12 U	0.00E+00
3/13/2015		35189	10045	160	58	1.92E-04	1.3 U	0.00E+00	17	4.17E-05	1.3 U	0.00E+00	2.4	5.77E-06	3.6	8.66E-06	1.3 U	0.00E+00	32	1.32E-04	5.8	1.89E-05	1.3 U	0.00E+00	13 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																										
5/15/2015		35194	10046	160	63	2.08E-04	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	2.3 U	0.00E+00	2.7	6.49E-06	2.3 U	0.00E+00	67	2.76E-04	7.1	2.31E-05	2.3 U	0.00E+00	23 U	0.00E+00
7/16/2015		36677	10343	160	110	3.64E-04	1.1 U	0.00E+00	32	7.86E-05	1.1 U	0.00E+00	3.1	7.45E-06	6.7	1.61E-05	1.1 U	0.00E+00	170	6.99E-04	19	6.19E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																										
9/22/2015		36680	10343	160	150	4.96E-04	1.4 U	0.00E+00	29	7.12E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6	1.35E-05	1.4 U	0.00E+00	250	1.03E-03	20	6.52E-05	1.4 U	0.00E+00	14 U	0.00E+00
11/20/2015		38094	10626	160	41	1.36E-04	1.0 U	0.00E+00	9.5	2.33E-05	1.0 U	0.00E+00	1.3	3.13E-06	2.5	6.01E-06	1.0 U	0.00E+00	46	1.89E-04	7.7	2.51E-05	1.0 U	0.00E+00	10 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																										
1/19/2016		38101	10627	160	80	2.65E-04	1.1 U	0.00E+00	15	3.68E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.8	6.73E-06	1.1 U	0.00E+00	100	4.11E-04	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/18/2016		39377	10883	160	48	1.59E-04	1.1 U	0.00E+00	14	3.44E-05	1.1 U	0.00E+00	1.9	4.57E-06	3.6	8.66E-06	1.1 U	0.00E+00	43	1.77E-04	7.7	2.51E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																										
5/19/2016		39382	10884	160	55	1.82E-04	0.98 U	0.00E+00	14	3.44E-05	0.98 U	0.00E+00	0.98 U	0.00E+00	2.8	6.73E-06	0.98 U	0.00E+00	70	2.88E-04	8.3	2.71E-05	0.98 U	0.00E+00	9.8 U	0.00E+00
7/22/2016		40915	11190	160	94	3.11E-04	1.2 U	0.00E+00	22	5.40E-05	1.2 U	0.00E+00	2.3	5.53E-06	4.9	1.18E-05	1.2 U	0.00E+00	210	8.64E-04	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																										
9/20/2016		40918	11191	160	120	3.97E-04	1.0 U	0.00E+00	16	3.93E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	3.3	7.94E-06	1.0 U	0.00E+00	260	1.07E-03	15	4.89E-05	1.0 U	0.00E+00	10 U	0.00E+00
11/28/2016		42571	11521	160	50	1.65E-04	1.1 U	0.00E+00	16	3.93E-05	1.1 U	0.00E+00	2.4	5.77E-06	3.2	7.70E-06	1.1 U	0.00E+00	91	3.74E-04	9.7	3.16E-05	1.1 U	0.00E+00	11 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																										
1/24/2017		42575	11522	170	45	1.58E-04	1.1 U	0.00E+00	12	3.13E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.09E-06	1.1 U	0.00E+00	49	2.14E-04	6.2	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00
3/23/2017		43840	11775	160	36	1.19E-04	1.2 U	0.00E+00	14	3.44E-05	1.2 U	0.00E+00	2.1	5.05E-06	2.8	6.73E-06	1.2 U	0.00E+00	43	1.77E-04	6.4	2.09E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																										
5/15/2017		43846	11776	160	49	1.62E-04	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.6	6.25E-06	1.1 U	0.00E+00	67	2.76E-04	7.5	2.44E-05	1.1 U	0.00E+00	11 U	0.00E+00
7/20/2017		45423	12092	170	89	3.13E-04	1.2 U	0.00E+00	18	4.69E-05	1.2 U	0.00E+00	2	5.11E-06	4.7	1.20E-05	1.2 U	0.00E+00	190	8.30E-04	19	6.58E-05	1.2 U	0.00E+00	12 U	0.00E+00
Pulse -off period July 20, 2017 to September 14, 2017																										
9/14/2017		45432	12094	160	130	4.30E-04	1.1 U	0.00E+00	19	4.66E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	8.18E-06	1.1 U	0.00E+00	300	1.23E-03	23	7.50E-05	1.1 U	0.00E+00	11 U</	

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or

When a duplicate sample was collected, the original sample results are used in the mass calculations.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

Table 4.1
Cell 1 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 1 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 1 Run Time (hr)	SVE Flow Rate (scfm)	Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)				
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)						
Pulse -off period November 18, 2013 to January 15, 2014																														
1/15/2014		28218	8651	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	7.32E-04	49.36						
3/14/2014		29432	8894	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	5.12E-04	49.48								
Pulse -off period March 14, 2014 to May 15, 2014																														
5/15/2014		29914	8990	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	6.60E-04	49.54								
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.42E-03	50.01										
Pulse -off period July 23, 2014 to September 16, 2014																														
9/16/2014		32432	9494	160	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.75E-03	50.32								
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	4.74E-04	50.45								
Pulse -off period November 14, 2014 to January 9, 2015																														
1/9/2015	Dup	33855	9778	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	5.99E-04	50.45								
1/9/2015		-	-	160	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	6.95E-04	-								
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	3.99E-04	50.56								
Pulse -off period March 13, 2015 to May 15, 2015																														
5/15/2015		35194	10046	160	2.3 U	0.00E+00	2.3 U	0.00E+00	9.2 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.2 U	0.00E+00	5.51E-04	50.56								
7/16/2015		36677	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.23E-03	50.92								
Pulse -off period July 16, 2015 to September 22, 2015																														
9/22/2015		36680	10343	160	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	2.2	5.79E-06	3.4	8.95E-06	1.4 U	0.00E+00	14 U	0.00E+00	5.5 U	0.00E+00	1.69E-03	50.92				
11/20/2015		38094	10626	160	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.5	3.43E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 U	0.00E+00	3.86E-04	51.03				
Pulse -off period November 20, 2015 to January 19, 2016																														
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.2 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.2 U	0.00E+00	7.56E-04	51.03								
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	4.18E-04	51.14								
Pulse -off period March 18, 2016 to May 19, 2016																														
5/19/2016		39382	10884	160	0.98 U	0.00E+00	0.98 U	0.00E+00	3.9 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00E+00	0.98 U	0.00														

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/11/2009	Dup	178	59	150	40000	1.24E-01	86 U	0.00E+00	21000	4.83E-02	86 U	0.00E+00	4500	1.01E-02	25000	5.64E-02	86 U	0.00E+00	1500	5.78E-03
12/15/2009		205	68	140	27000	7.82E-02	110 U	0.00E+00	14000	3.01E-02	110 U	0.00E+00	3100	6.52E-03	16000	3.37E-02	110 U	0.00E+00	950	3.42E-03
12/29/2009		539	180	140	24000	6.95E-02	100 U	0.00E+00	9100	1.95E-02	100 U	0.00E+00	2100	4.42E-03	9200	1.94E-02	100 U	0.00E+00	1000	3.60E-03
1/13/2010		903	301	150	9100	2.82E-02	35 U	0.00E+00	3700	8.52E-03	35 U	0.00E+00	880	1.98E-03	3200	7.21E-03	35 U	0.00E+00	610	2.35E-03
1/27/2010		1224	408	150	13000	4.03E-02	40 U	0.00E+00	4300	9.90E-03	40 U	0.00E+00	1100	2.48E-03	3900	8.79E-03	40 U	0.00E+00	600	2.31E-03
1/27/2010		1224	408	150	14000	4.34E-02	40 U	0.00E+00	4800	1.10E-02	40 U	0.00E+00	1200	2.71E-03	4400	9.92E-03	40 U	0.00E+00	630	2.43E-03
2/24/2010		1893	631	150	8000	2.48E-02	22 U	0.00E+00	3000	6.90E-03	22 U	0.00E+00	520	1.17E-03	2300	5.19E-03	22 U	0.00E+00	200	7.71E-04
3/15/2010		2345	782	140	17000	4.92E-02	48 U	0.00E+00	8000	1.72E-02	48 U	0.00E+00	1100	2.31E-03	6300	1.33E-02	48 U	0.00E+00	860	3.10E-03
4/14/2010		2804	935	150	8400	2.61E-02	23 U	0.00E+00	2200	5.06E-03	23 U	0.00E+00	480	1.08E-03	2000	4.51E-03	23 U	0.00E+00	1300	5.01E-03
5/13/2010		3495	1165	140	8000	2.32E-02	11 U	0.00E+00	3100	6.66E-03	11 U	0.00E+00	480	1.01E-03	2800	5.89E-03	11 U	0.00E+00	380	1.37E-03
6/21/2010		4430	1477	108	5800	1.30E-02	23 U	0.00E+00	3000 J	4.97E-03	23 U	0.00E+00	360 J	5.84E-04	2100	3.41E-03	23 U	0.00E+00	300	8.33E-04
7/21/2010		5058	1686	140	4500	1.30E-02	14 U	0.00E+00	1600	3.44E-03	14 U	0.00E+00	280	5.89E-04	1200	2.53E-03	14 U	0.00E+00	260	9.36E-04
8/23/2010		5784	1928	0	7100	0.00E+00	20 U	0.00E+00	2700	0.00E+00	20 U	0.00E+00	290	0.00E+00	1400	0.00E+00	20 U	0.00E+00	620	0.00E+00
9/23/2010		6523	2174	145	4300	1.29E-02	12 U	0.00E+00	1600	3.56E-03	12 U	0.00E+00	270	5.88E-04	940	2.05E-03	12 U	0.00E+00	290	1.08E-03
10/22/2010		7219	2406	140	2500	7.24E-03	10 U	0.00E+00	890	1.91E-03	10 U	0.00E+00	110	2.31E-04	470	9.89E-04	10 U	0.00E+00	180	6.48E-04
11/15/2010		7794	2598	140	3200	9.27E-03	11 U	0.00E+00	1100	2.36E-03	11 U	0.00E+00	130	2.74E-04	440	9.26E-04	11 U	0.00E+00	120	4.32E-04
12/22/2010		8508	2955	150	4000	1.24E-02	14 U	0.00E+00	1500	3.45E-03	14 U	0.00E+00	240	5.41E-04	730	1.65E-03	14 U	0.00E+00	72	2.78E-04
1/24/2011		9302	3352	170	780	2.74E-03	2.7 U	0.00E+00	800	2.09E-03	2.7 U	0.00E+00	22	5.62E-05	390	9.96E-04	2.7 U	0.00E+00	26	1.14E-04
2/25/2011		10071	3737	165	1500	5.12E-03	4.0 U	0.00E+00	1100	2.78E-03	4.0 U	0.00E+00	44	1.09E-04	560	1.39E-03	4.0 U	0.00E+00	32	1.36E-04
3/18/2011		10573	3988	165	370	1.26E-03	1.0 U	0.00E+00	160	4.05E-04	1.0 U	0.00E+00	11	2.73E-05	62	1.54E-04	1.0 U	0.00E+00	19	8.06E-05
4/15/2011		11241	4322	160	300 J,B	9.93E-04	1.0 U	0.00E+00	95	2.33E-04	1.0 U	0.00E+00	12	2.89E-05	41	9.86E-05	1.0 U	0.00E+00	20	8.23E-05
5/19/2011		12061	4732	160	93	3.08E-04	1.1 U	0.00E+00	39	9.57E-05	1.1 U	0.00E+00	3.5	8.42E-06	21	5.05E-05	1.1 U	0.00E+00	14	5.76E-05
6/16/2011		12722	5062	170	99	3.48E-04	1.2 U	0.00E+00	48	1.25E-04	1.2 U	0.00E+00	2.4	6.13E-06	21	5.37E-05	1.2 U	0.00E+00	30	1.31E-04
7/15/2011		13417	4472	170	77	2.71E-04	1.2 U	0.00E+00	25	6.52E-05	1.2 U	0.00E+00	1.7	4.34E-06	18	4.60E-05	1.2 U	0.00E+00	30	1.31E-04
8/22/2011		14324	4775	170	78	2.74E-04	1.2 U	0.00E+00	31	8.09E-05	1.2 U	0.00E+00	1.2	3.07E-06	17	4.34E-05	1.2 U	0.00E+00	54	2.36E-04
9/15/2011		14905	4968	170	69	2.43E-04	1.1 U	0.00E+00	20	5.22E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	12	3.07E-05	1.1 U	0.00E+00	32	1.40E-04
10/14/2011		15598	5199	160	43	1.42E-04	0.82 U	0.00E+00	12	2.95E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	6.3	1.52E-05	0.82 U	0.00E+00	8.4	3.46E-05
11/21/2011		16510	5503	170	28 J,B	9.85E-05	1.6 U	0.00E+00	7.7	2.01E-05	1.6 U	0.00E+00	1.6 U	0.00E+00	4.1	1.05E-05	1.6 U	0.00E+00	7	3.06E-05
12/14/2011																				

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/11/2009	Dup	178	59	150	330	1.01E-03	4400	6.40E-03	86 U	0.00E+00	86 U	0.00E+00	210	3.15E-04	86 U	0.00E+00	200	4.29E-04		
12/15/2009		205	68	140	240	6.84E-04	3500	4.75E-03	110 U	0.00E+00	110 U	0.00E+00	370	5.18E-04	110 U	0.00E+00	140	2.80E-04		
12/29/2009		539	180	140	240	6.84E-04	1500	2.03E-03	100 U	0.00E+00	100 U	0.00E+00	120	1.68E-04	100 U	0.00E+00	100 U	0.00E+00		
1/13/2010		903	301	150	130	3.97E-04	250	3.63E-04	35 U	0.00E+00	35 U	0.00E+00	170	2.55E-04	35 U	0.00E+00	35 U	0.00E+00		
1/27/2010		1224	408	150	150	4.58E-04	200	2.91E-04	40 U	0.00E+00	40 U	0.00E+00	120	1.80E-04	40 U	0.00E+00	40 U	0.00E+00		
1/27/2010		1224	408	150	180	5.50E-04	240	3.49E-04	40 U	0.00E+00	40 U	0.00E+00	130	1.95E-04	40 U	0.00E+00	40 U	0.00E+00		
2/24/2010		1893	631	150	98	2.99E-04	73	1.06E-04	22 U	0.00E+00	22 U	0.00E+00	38	5.70E-05	22 U	0.00E+00	22 U	0.00E+00		
3/15/2010		2345	782	140	210	5.99E-04	62	8.41E-05	48 U	0.00E+00	48 U	0.00E+00	180	2.52E-04	48 U	0.00E+00	48 U	0.00E+00		
4/14/2010		2804	935	150	190	5.81E-04	69	1.00E-04	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00		
5/13/2010		3495	1165	140	78	2.22E-04	42	5.70E-05	11 U	0.00E+00	11 U	0.00E+00	20	2.80E-05	11 U	0.00E+00	11 U	0.00E+00		
6/21/2010		4430	1477	108	88	1.94E-04	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	33 J	3.56E-05	23 U	0.00E+00	23 U	0.00E+00		
7/21/2010		5058	1686	140	80	2.28E-04	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00		
8/23/2010		5784	1928	0	150	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	21	0.00E+00	20 U	0.00E+00	20 U	0.00E+00		
9/23/2010		6523	2174	145	74	2.19E-04	12	1.69E-05	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00		
10/22/2010		7219	2406	140	42	1.20E-04	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00		
11/15/2010		7794	2598	140	35	9.98E-05	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00		
12/22/2010		8508	2955	150	27	8.25E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00		
1/24/2011		9302	3352	170	9	3.12E-05	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	3.1	7.53E-06		
2/25/2011		10071	3737	165	15	5.04E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00		
3/18/2011		10573	3988	165	7.3	2.45E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00		
4/15/2011		11241	4322	160	8.5	2.77E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00		
5/19/2011		12061	4732	160	11	3.59E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	8.1	1.57E-05	1.1 U	0.00E+00		
6/16/2011		12722	5062	170	15	5.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.9	3.91E-06	1.2 U	0.00E+00		
7/15/2011		13417	4472	170	21	7.27E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	5.3	1.09E-05	1.2 U	0.00E+00		
8/22/2011		14324	4775	170	22	7.62E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00		
9/15/2011		14905	4968	170	18	6.23E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	4.6	9.47E-06	1.1 U	0.00E+00		
10/14/2011		15598	5199	160	9.1	2.97E-05	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	3.3 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00		
11/21/2011		16510	5503	170	5.1	1.77E-05	1.6 U	0.00E+00	1.6 UJ	0.00E+00	1.6 U	0.00E+00	6.4 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00		
12/14/2011		17010	5670	170	3.4	1.18E-05	0.76 U	0.00E+00	7.6 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	0.78	1.61E-06	0.76 U	0.00E+00		
1/19/2012		17923	5974	170	2.9	1.00E-05	0.74 U	0.00E+00	1.9	4.25E-06	0.74 U	0.00E+00	3.0 U	0.00E+00	0.74 U	0.00E+00	1	2.43E-06		
2/15/2012		18566	6189	170	2.2	7.62E-06	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	2.9 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00		
3/15/2012		19262	6421	170</td																

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/11/2009	Dup	178	59	150	86 U	0.00E+00	240	5.93E-04	110	2.72E-04	340 U	0.00E+00	86 U	0.00E+00	2.54E-01	15.05
12/15/2009		205	68	140	110 U	0.00E+00	230	5.30E-04	110 U	0.00E+00	430 U	0.00E+00	110 U	0.00E+00	1.59E-01	16.48
12/29/2009		539	180	140	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.19E-01	29.76
1/13/2010		903	301	150	35 U	0.00E+00	35 U	0.00E+00	35 U	0.00E+00	140 U	0.00E+00	35 U	0.00E+00	4.93E-02	35.75
1/27/2010		1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	6.47E-02	42.68
1/27/2010		1224	408	150	40 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	160 U	0.00E+00	40 U	0.00E+00	7.06E-02	43.31
2/24/2010		1893	631	150	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	87 U	0.00E+00	22 U	0.00E+00	3.93E-02	51.44
3/15/2010		2345	782	140	48 U	0.00E+00	48 U	0.00E+00	48 U	0.00E+00	190 U	0.00E+00	48 U	0.00E+00	8.60E-02	64.40
4/14/2010		2804	935	150	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	4.24E-02	70.89
5/13/2010		3495	1165	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	3.84E-02	79.74
6/21/2010		4430	1477	108	23 U	0.00E+00	23 U	0.00E+00	23 U	0.00E+00	92 U	0.00E+00	23 U	0.00E+00	2.30E-02	86.90
7/21/2010		5058	1686	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	58 U	0.00E+00	14 U	0.00E+00	2.07E-02	91.24
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	91.24
9/23/2010		6523	2174	145	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	2.04E-02	96.27
10/22/2010		7219	2406	140	10 U	0.00E+00	10 U	0.00E+00	10 U	0.00E+00	42 U	0.00E+00	10 U	0.00E+00	1.11E-02	98.85
11/15/2010		7794	2598	140	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	44 U	0.00E+00	11 U	0.00E+00	1.34E-02	101.41
12/22/2010		8508	2955	150	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	56 U	0.00E+00	14 U	0.00E+00	1.84E-02	107.99
1/24/2011		9302	3352	170	2.7 U	0.00E+00	2.7 U	0.00E+00	2.7 U	0.00E+00	11 U	0.00E+00	11	2.09E-05	6.06E-03	110.39
2/25/2011		10071	3737	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	9.59E-03	114.08
3/18/2011		10573	3988	165	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	15	2.23E-05	4.0 U	0.00E+00	1.98E-03	114.57
4/15/2011		11241	4322	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	8.2 J,B	1.18E-05	4.1 U	0.00E+00	1.48E-03	115.07
5/19/2011		12061	4732	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.58E-05	4.5 U	0.00E+00	5.87E-04	115.31
6/16/2011		12722	5062	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.7 U	0.00E+00	7.49E-04	115.55
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	19	2.91E-05	4.6 U	0.00E+00	6.30E-04	115.18
8/22/2011		14324	4775	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8 J,B	1.04E-05	4.7 U	0.00E+00	7.28E-04	115.40
9/15/2011		14905	4968	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11	1.68E-05	4.5 U	0.00E+00	5.54E-04	115.51
10/14/2011		15598	5199	160	0.82 U	0.00E+00	0.82 U	0.00E+00	0.82 U	0.00E+00	5	7.20E-06	3.3 U	0.00E+00	2.58E-04	115.57
11/21/2011		16510	5503	170	1.6 U	0.00E+00	1.6 U	0.00E+00	1.6 U	0.00E+00	6.4 UJ	0.00E+00	6.4 U	0.00E+00	1.77E-04	115.62
12/14/2011		17010	5670	170	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	7.6 UJ	0.00E+00	3.0 U	0.00E+00	1.65E-04	115.65
1/19/2012		17923	5974	170	0.79	2.21E-06	1.5	4.20E-06	1.1	3.08E-06	14	2.14E-05	3.0 U	0.00E+00	1.80E-04	115.71
2/15/2012		18566	6189	170	0.73 U	0.00E+00	0.73 U	0.00E+00	0.73 U	0.00E+00	7.9	1.21E-05	2.9 U	0.00E+00	1.83E-04	115.74
3/15/2012		19262	6421	170	0.71 U	0.00E+00	0.71 U	0.00E+00	0.71 U	0.00E+00	8.9	1.36E-05	2.8 U	0.00E+00	1.75E-04	115.79
4/19/2012		20102	6701	160	0.76 U	0.00E+00	0.76 U	0.00E+00	0.76 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	1.88E-04	115.84
5/16/2012		20748	6916	160	0.78 U	0.00E+00	0.78 U	0.00E+00	0.78 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00	1.94E-04	115.88
Pulse-off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	21	3.03E-05	5.3 U	0.00E+00	1.79E-03	116.20
9/17/2012		219														

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	240	7.94E-04	1.1 U	0.00E+00	99	2.43E-04	1.1 U	0.00E+00	4.8	1.15E-05	7.8	1.88E-05	1.1 U	0.00E+00	14	5.76E-05
7/23/2014		31567	9321	160	89	2.95E-04	1.2 U	0.00E+00	20	4.91E-05	1.2 U	0.00E+00	1.8	4.33E-06	3.7	8.90E-06	1.2 U	0.00E+00	11	4.52E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	310	1.03E-03	2.1 U	0.00E+00	120	2.95E-04	2.1 U	0.00E+00	3.9	9.38E-06	6	1.44E-05	2.1 U	0.00E+00	19	7.82E-05
11/14/2014		33847	9777	160	42	1.39E-04	1.1 U	0.00E+00	7.8	1.91E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	3.85E-06	1.1 U	0.00E+00	11	4.52E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	210	6.95E-04	1.2 U	0.00E+00	69	1.69E-04	1.2 U	0.00E+00	3.7	8.90E-06	3.4	8.18E-06	1.2 U	0.00E+00	8.2	3.37E-05
3/13/2015		35189	10045	160	18	5.96E-05	1.3 U	0.00E+00	5.4	1.33E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3	0.00E+00	1.3 U	0.00E+00	3.5	1.44E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	240	7.94E-04	1.2 U	0.00E+00	76	1.87E-04	1.2 U	0.00E+00	3.0	7.21E-06	3.5	8.42E-06	1.2 U	0.00E+00	8.2	3.37E-05
7/16/2015		36677	10343	160	64	2.12E-04	1.2 U	0.00E+00	17	4.17E-05	1.2 U	0.00E+00	1.7	4.09E-06	4.2	1.01E-05	1.2 U	0.00E+00	8.6	3.54E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	450	1.49E-03	1.1 U	0.00E+00	210	5.16E-04	1.1 U	0.00E+00	3.4	8.18E-06	9.6	2.31E-05	1.1 U	0.00E+00	28	1.15E-04
11/20/2015		38094	10626	160	43	1.42E-04	1.2 U	0.00E+00	12	2.95E-05	1.2 U	0.00E+00	1.5	3.61E-06	1.2 U	0.00E+00	14	5.76E-05		
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	260	8.60E-04	1.1 U	0.00E+00	89	2.18E-04	1.1 U	0.00E+00	2.5	6.01E-06	3.2	7.70E-06	1.1 U	0.00E+00	14	5.76E-05
3/18/2016		39377	10883	160	23	7.61E-05	1.1 U	0.00E+00	9.5	2.33E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1	0.00E+00	1.1 U	0.00E+00	3.6	1.48E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	210	6.95E-04	1.2 U	0.00E+00	96	2.36E-04	1.2 U	0.00E+00	2.7	6.49E-06	3.1	7.46E-06	1.2 U	0.00E+00	7	2.88E-05
7/22/2016		40915	11190	160	33	1.09E-04	1.2 U	0.00E+00	13	3.19E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.8	9.14E-06	1.2 U	0.00E+00	19	7.82E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	280	9.27E-04	1.2 U	0.00E+00	150	3.68E-04	1.2 U	0.00E+00	3.2	7.70E-06	6.9	1.66E-05	1.2 U	0.00E+00	32	1.32E-04
11/28/2016		42571	11521	160	26	8.60E-05	1.1 U	0.00E+00	12	2.95E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.3	5.53E-06	1.1 U	0.00E+00	20	8.23E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	150	5.27E-04	1.1 U	0.00E+00	78	2.03E-04	1.1 U	0.00E+00	2.2	5.62E-06	2.6	6.64E-06	1.1 U	0.00E+00	23	1.01E-04
3/23/2017		43840	11775	160	27	8.93E-05	1.1 U	0.00E+00	11	2.70E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	2.1	5.05E-06	1.1 U	0.00E+00	5.2	2.14E-05
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	150	4.96E-04	1.2 U	0.00E+00	77	1.89E-04	1.2 U	0.00E+00	2.1	5.05E-06	3.4	8.18E-06	1.2 U	0.00E+00	12	4.94E-05
7/20/2017		45423	12092	170	24	8.44E-05	1.2 U	0.00E+00	13	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.3	3.32E-06	1.2 U	0.00E+00	14	6.12E-05
Pulse -off period July 20, 2017 to September 14, 2017																				
9/14/2017		45432	12094	160	280	9.27E-04	1.1 U	0.00E+00	250	6.14E-04	1.1 U	0.00E+00	2	4.81E-06	8.4	2.02E-05	1.1 U	0.00E+00	41	1.69E-04
11/17/2017		46966	12400	160	22	7.28E-05	1.2 U	0.00E+00	9.3	2.28E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	0.00E+00	1.2			

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	8990	160	6.6	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	16	2.56E-05	1.1 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		31567	9321	160	19	6.19E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	9494	160	26	8.47E-05	2.1 U	0.00E+00	21 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	8.3 U	0.00E+00	3.5	6.78E-06	2.1 U	0.00E+00
11/14/2014		33847	9777	160	7.3	2.38E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	9778	160	9.3	3.03E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/13/2015		35189	10045	160	3.0	9.78E-06	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	10046	160	5.4	1.76E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.0	1.12E-05	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	10343	160	18.0	5.87E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	10343	160	30	9.78E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		38094	10626	160	9.7	3.16E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	10627	160	8.5	2.77E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	10883	160	3	9.78E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	10884	160	4.2	1.37E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		40915	11190	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.5	2.91E-06	1.2 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	11191	160	20	6.52E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	11521	160	8.9	2.90E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	11522	170	8.7	3.01E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	11775	160	5.6	1.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																				
5/15/2017		43846	11776	160	7.4	2.41E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		45423	12092	170	18	6.23E-05	1.2 U	0.												

Table 4.2
Cell 2 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 2 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 2 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period	March 14, 2014 to May 15, 2014															
5/15/2014		29914	8990	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	25	3.60E-05	11 U	0.00E+00	1.21E-03	117.64
7/23/2014		31567	9321	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	4.64E-04	117.79
Pulse-off period	July 23, 2014 to September 16, 2014															
9/16/2014		32432	9494	160	2.1 U	0.00E+00	2.1 U	0.00E+00	2.1 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	1.51E-03	118.05
11/14/2014		33847	9777	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.31E-04	118.12
Pulse-off period	November 14, 2014 to January 9, 2015															
1/9/2015		33855	9778	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	9.45E-04	118.12
3/13/2015		35189	10045	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	9.70E-05	118.15
Pulse-off period	March 13, 2015 to May 15, 2015															
5/15/2015		35194	10046	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.06E-03	118.15
7/16/2015		36677	10343	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.62E-04	118.25
Pulse-off period	July 16, 2015 to September 22, 2015															
9/22/2015		36680	10343	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	118.26
11/20/2015		38094	10626	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.65E-04	118.33
Pulse-off period	November 20, 2015 to January 19, 2016															
1/19/2016		38101	10627	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.18E-03	118.33
3/18/2016		39377	10883	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.24E-04	118.36
Pulse-off period	March 18, 2016 to May 19, 2016															
5/19/2016		39382	10884	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	9.87E-04	118.36
7/22/2016		40915	11190	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.77E-04	118.45
Pulse-off period	July 22, 2016 to September 20, 2016															
9/20/2016		40918	11191	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.52E-03	118.45
11/28/2016		42571	11521	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.32E-04	118.53
Pulse-off period	November 28, 2016 to January 24, 2017															
1/24/2017		42575	11522	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.74E-04	118.53
3/23/2017		43840	11775	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.61E-04	118.57
Pulse-off period	March 23, 2017 to May 15, 2017															
5/15/2017		43846	11776	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	0.00E+00	4.9 U	0.00E+00	7.72E-04	118.57
7/20/2017		45423	12092	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.45E-04	118.65
Pulse-off period	July 20, 2017 to September 14, 2017															
9/14/2017		45432	12094	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.84E-03	118.65
11/17/2017		46966	12400	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.50E-04	118.70
Pulse-off period	November 17, 2017 to January 22, 2018															
1/22/2018		46970	12401	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	9.05E-04	118.70
3/23/2018		48239	12655	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.57E-05	118.70
Pulse-off period	March 23, 2018 to May 21, 2018															
5/21/2018		48242	12656	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	8.34E-04	118.70

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCEM standard cubic feet per minute

SCFM standard cubic feet per minute
J Indicates estimated value.
B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

are used in the mass calculations.

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/14/2009	Dup	181	60	140	94000	2.72E-01	270 U	0.00E+00	1100	2.36E-03	270 U	0.00E+00	2300	4.84E-03	8100	1.70E-02	270 U	0.00E+00	750	2.70E-03
12/16/2009		229	76	150	46000	1.43E-01	110 U	0.00E+00	710	1.63E-03	110 U	0.00E+00	1100	2.48E-03	5500	1.24E-02	110 U	0.00E+00	400	1.54E-03
1/5/2010		707	236	140	42000	1.22E-01	150 U	0.00E+00	290	6.23E-04	150 U	0.00E+00	980	2.06E-03	1500	3.16E-03	150 U	0.00E+00	240	8.64E-04
1/21/2010		1084	361	150	15000	4.65E-02	42 U	0.00E+00	260	5.98E-04	42 U	0.00E+00	280	6.31E-04	1600	3.61E-03	42 U	0.00E+00	170	6.56E-04
1/21/2010		1084	361	150	16000	4.96E-02	43 U	0.00E+00	280	6.44E-04	43 U	0.00E+00	290	6.54E-04	1700	3.83E-03	43 U	0.00E+00	170	6.56E-04
2/24/2010		1893	631	150	11000	3.41E-02	28 U	0.00E+00	240	5.52E-04	28 U	0.00E+00	280	6.31E-04	1100	2.48E-03	28 U	0.00E+00	140	5.40E-04
3/15/2010		2345	782	140	20000	5.79E-02	21 U	0.00E+00	400	8.59E-04	21 U	0.00E+00	510	1.07E-03	1900	4.00E-03	21 U	0.00E+00	280	1.01E-03
4/14/2010		2804	935	150	31000	9.62E-02	100 U	0.00E+00	380	8.75E-04	100 U	0.00E+00	1100	2.48E-03	1200	2.71E-03	100 U	0.00E+00	820	3.16E-03
5/13/2010		3495	1165	140	8300	2.40E-02	12 U	0.00E+00	220	4.73E-04	12 U	0.00E+00	190	4.00E-04	960	2.02E-03	12 U	0.00E+00	200	7.20E-04
6/21/2010		4430	1477	108	7200	1.61E-02	21 U	0.00E+00	220	3.65E-04	21 U	0.00E+00	150	2.43E-04	660	1.07E-03	21 U	0.00E+00	160	4.44E-04
7/21/2010		5058	1686	140	6100	1.77E-02	20 U	0.00E+00	120	2.58E-04	20 U	0.00E+00	130	2.74E-04	460	9.68E-04	20 U	0.00E+00	120	4.32E-04
8/23/2010		5784	1928	0	8000	0.00E+00	20 U	0.00E+00	200	0.00E+00	20 U	0.00E+00	120	0.00E+00	490	0.00E+00	20 U	0.00E+00	220	0.00E+00
9/23/2010		6523	2174	145	6600	1.98E-02	11 U	0.00E+00	140	3.11E-04	11 U	0.00E+00	140	3.05E-04	440	9.59E-04	11 U	0.00E+00	160	5.96E-04
10/22/2010		7219	2406	140	3700	1.07E-02	14 U	0.00E+00	91	1.95E-04	14 U	0.00E+00	66	1.39E-04	210	4.42E-04	14 U	0.00E+00	110	3.96E-04
11/15/2010		7794	2598	140	4600	1.33E-02	15 U	0.00E+00	120	2.58E-04	15 U	0.00E+00	64	1.35E-04	170	3.58E-04	15 U	0.00E+00	88	3.17E-04
12/22/2010		8508	2777	150	5600	1.74E-02	20 U	0.00E+00	150	3.45E-04	20 U	0.00E+00	120	2.71E-04	330	7.44E-04	20 U	0.00E+00	56	2.16E-04
1/24/2011		9302	2975	170	2200	7.74E-03	8.3 U	0.00E+00	130	3.39E-04	8.3 U	0.00E+00	27	6.90E-05	200	5.11E-04	8.3 U	0.00E+00	35	1.53E-04
2/25/2011		10071	3167	165	1300	4.44E-03	4.0 U	0.00E+00	45	1.14E-04	4.0 U	0.00E+00	25	6.20E-05	72	1.79E-04	4.0 U	0.00E+00	28	1.19E-04
3/18/2011		10573	3293	165	360	1.23E-03	1.3 U	0.00E+00	24	6.08E-05	1.3 U	0.00E+00	5.4	1.34E-05	35	8.68E-05	1.3 U	0.00E+00	13	5.51E-05
4/15/2011		11241	3460	160	160 J,B	5.29E-04	1.0 U	0.00E+00	17	4.17E-05	1.0 U	0.00E+00	2.8	6.73E-06	28	6.73E-05	1.0 U	0.00E+00	15	6.17E-05
5/19/2011		12061	3665	160	64	2.12E-04	1.2 U	0.00E+00	10	2.45E-05	1.2 U	0.00E+00	1.4	3.37E-06	12	2.89E-05	1.2 U	0.00E+00	9.6	3.95E-05
6/16/2011		12722	3830	170	160	5.63E-04	1.2 U	0.00E+00	280	7.30E-04	1.2 U	0.00E+00	2.5	6.39E-06	34	8.69E-05	1.2 U	0.00E+00	61	2.67E-04
7/15/2011		13417	4472	170	190	6.68E-04	1.2 U	0.00E+00	8.3	2.16E-05	1.2 U	0.00E+00	2.8	7.15E-06	23	5.88E-05	1.2 U	0.00E+00	22	9.62E-05
8/22/2011		14324	4775	170	1600	5.63E-03	4.3 U	0.00E+00	19	4.96E-05	4.3 U	0.00E+00	21	5.37E-05	130	3.32E-04	4.3 U	0.00E+00	39	1.70E-04
9/15/2011		14905	4968	170	800	2.81E-03	3.7 U	0.00E+00	9.5	2.48E-05	3.7 U	0.00E+00	12	3.07E-05	62	1.58E-04	3.7 U	0.00E+00	24	1.05E-04
10/14/2011		15598	5199	160	750	2.48E-03	3.0 U	0.00E+00	10	2.45E-05	3.0 U	0.00E+00	13	3.13E-05	37	8.90E-05	3.0 U	0.00E+00	15	6.17E-05
11/21/2011		16510	5503	170	380	1.34E-03	1.4 U	0.00E+00	6.6	1.72E-05	1.4 U	0.00E+00	5.6	1.43E-05	24	6.13E-05	1.4 U	0.00E+00	7.9	3.45E-05
12/14/2011		17010	5670	170	830	2.92E-03	3.5 U	0.00E+00	8.7	2.27E-05	3.5 U	0.00E+00	70	1.79E-04	33	8.43E-05	3.5 U	0.00E+00	6.9	3.02E-05
1/19/2012		17923	5974	170	800	2.81E-03	3.0 U	0.00E+00	12	3.13E-05	3.0 U	0.00E+00	13	3.32E-05	33	8.43E-05	3.0 U	0		

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
12/14/2009	Dup	181	60	140	1000	2.85E-03	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00	270 U	0.00E+00
12/16/2009		229	76	150	550	1.68E-03	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00	110 U	0.00E+00
1/5/2010		707	236	140	250	7.13E-04	150 U	0.00E+00	220	4.06E-04	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00
1/21/2010		1084	361	150	140	4.28E-04	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00
1/21/2010		1084	361	150	140	4.28E-04	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00
2/24/2010		1893	631	150	66	2.02E-04	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00
3/15/2010		2345	782	140	120	3.42E-04	51	6.92E-05	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
4/14/2010		2804	935	150	190	5.81E-04	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00
5/13/2010		3495	1165	140	43	1.23E-04	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00
6/21/2010		4430	1477	108	55	1.21E-04	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00
7/21/2010		5058	1686	140	44	1.25E-04	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
8/23/2010		5784	1928	0	66	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
9/23/2010		6523	2174	145	50	1.48E-04	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00
10/22/2010		7219	2406	140	31	8.84E-05	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00
11/15/2010		7794	2598	140	29	8.27E-05	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00
12/22/2010		8508	2777	150	21	6.42E-05	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00
1/24/2011		9302	2975	170	17	5.89E-05	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00
2/25/2011		10071	3167	165	16	5.38E-05	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00
3/18/2011		10573	3293	165	5.9	1.98E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.4 U	0.00E+00	1.9	3.80E-06	1.3 U	0.00E+00
4/15/2011		11241	3460	160	7.7	2.51E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	2.6	5.04E-06	1.0 U	0.00E+00
5/19/2011		12061	3665	160	6.9	2.25E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.9	3.68E-06	1.2 U	0.00E+00
6/16/2011		12722	3830	170	9.8	3.39E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.6	3.29E-06	1.2 U	0.00E+00
7/15/2011		13417	4472	170	9.3	3.22E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
8/22/2011		14324	4775	170	21	7.27E-05	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00
9/15/2011		14905	4968	170	14	4.85E-05	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	4.1	8.44E-06	3.7 U	0.00E+00
10/14/2011		15598	5199	160	13	4.24E-05	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00
11/21/2011		16510	5503	170	9.2	3.19E-05	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
12/14/2011		17010	5670	170	22	7.62E-05	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00
1/19/2012		17923	5974	170	12															

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
12/14/2009	Dup	181	60	140	270 U	0.00E+00	1600	3.69E-03	510	1.18E-03	1100 U	0.00E+00	270 U	0.00E+00	3.07E-01	18.51
12/16/2009		229	76	150	110 U	0.00E+00	540	1.33E-03	240	5.93E-04	590	7.97E-04	110 U	0.00E+00	1.65E-01	21.16
1/5/2010		707	236	140	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	590 U	0.00E+00	150 U	0.00E+00	1.29E-01	41.78
1/21/2010		1084	361	150	42 U	0.00E+00	42 U	0.00E+00	42 U	0.00E+00	170 U	0.00E+00	42 U	0.00E+00	5.25E-02	48.37
1/21/2010		1084	361	150	43 U	0.00E+00	43 U	0.00E+00	43 U	0.00E+00	170 U	0.00E+00	43 U	0.00E+00	5.59E-02	48.80
2/24/2010		1893	631	150	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00	3.85E-02	58.76
3/15/2010		2345	782	140	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	6.53E-02	68.60
4/14/2010		2804	935	150	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	1.06E-01	84.81
5/13/2010		3495	1165	140	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	48 U	0.00E+00	12 U	0.00E+00	2.78E-02	91.21
6/21/2010		4430	1477	108	21 U	0.00E+00	21 U	0.00E+00	21 U	0.00E+00	83 U	0.00E+00	21 U	0.00E+00	1.83E-02	96.92
7/21/2010		5058	1686	140	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	79 U	0.00E+00	20 U	0.00E+00	1.97E-02	101.05
8/23/2010		5784	1928	0	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	0.00E+00	101.05
9/23/2010		6523	2174	145	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	43 U	0.00E+00	11 U	0.00E+00	2.21E-02	106.49
10/22/2010		7219	2406	140	14 U	0.00E+00	14 U	0.00E+00	14 U	0.00E+00	55 U	0.00E+00	14 U	0.00E+00	1.20E-02	109.27
11/15/2010		7794	2598	140	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	59 U	0.00E+00	15 U	0.00E+00	1.45E-02	112.05
12/22/2010		8508	2777	150	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	82 U	0.00E+00	20 U	0.00E+00	1.90E-02	115.44
1/24/2011		9302	2975	170	8.3 U	0.00E+00	8.3 U	0.00E+00	8.3 U	0.00E+00	33 U	0.00E+00	8.3 U	0.00E+00	8.87E-03	117.20
2/25/2011		10071	3167	165	4.0 U	0.00E+00	4.0 U	0.00E+00	4.0 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	4.96E-03	118.15
3/18/2011		10573	3293	165	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	10	1.49E-05	5.4 U	0.00E+00	1.48E-03	118.34
4/15/2011		11241	3460	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.3 J,B	1.05E-05	4.1 U	0.00E+00	7.48E-04	118.47
5/19/2011		12061	3665	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	3.34E-04	118.53
6/16/2011		12722	3830	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	6.8	1.04E-05	4.7 U	0.00E+00	1.70E-03	118.81
7/15/2011		13417	4472	170	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	7.7	1.18E-05	4.8 U	0.00E+00	8.96E-04	119.39
8/22/2011		14324	4775	170	4.3 U	0.00E+00	4.3 U	0.00E+00	4.3 U	0.00E+00	17 U	0.00E+00	17 U	0.00E+00	6.30E-03	121.30
9/15/2011		14905	4968	170	3.7 U	0.00E+00	3.7 U	0.00E+00	3.7 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	3.19E-03	121.91
10/14/2011		15598	5199	160	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	2.73E-03	122.54
11/21/2011		16510	5503	170	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.5 U	0.00E+00	5.5 U	0.00E+00	1.50E-03	123.00
12/14/2011		17010	5670	170	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	380 J	5.82E-04	58	1.10E-04	4.00E-03	123.67
1/19/2012		17923	5974	170	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	3.03E-03	124.59
2/15/2012		18566	6189	170	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	18 U	0.00E+00	6.70E-03	126.03
3/15/2012		19262	6421	170	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	6.04E-03	127.43
4/19/2012		20102	6701	160	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	7.3 U	0.00E+00	7.3 U	0.00E+00	2.13E-03	128.02
5/16/2012		20748	6916	160	0.80 U	0.00E+00	0.80 U	0.00E+00	0.80 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	1.16E-03	128.27
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		21282	7094	160	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	4.27E-03	129.03
9/17/2012		21952	7317	160	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	65 U	0.00E+00	1.80E-02	133.04
Pulse -off period September 17, 2012 to November 15, 2012									</							

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	240	7.94E-04	1.2 U	0.00E+00	5	1.23E-05	1.2 U	0.00E+00	4.1	1.36E-05	16	3.85E-05	1.2 U	0.00E+00	18	7.40E-05
3/14/2014		29432	11645	160	72	2.38E-04	1.2 U	0.00E+00	8.7	2.14E-05	1.2 U	0.00E+00	2.4	7.94E-06	6.4	1.54E-05	1.2 U	0.00E+00	9.5	3.91E-05
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	770	2.55E-03	2.3 U	0.00E+00	15	3.68E-05	2.3 U	0.00E+00	12	3.97E-05	86	2.07E-04	2.3 U	0.00E+00	6.9	2.84E-05
7/23/2014		31567	12926	160	130	4.30E-04	1.4 U	0.00E+00	5	1.23E-05	1.4 U	0.00E+00	1.4	4.63E-06	10	2.40E-05	1.4 U	0.00E+00	10	4.11E-05
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	390	1.29E-03	2.4 U	0.00E+00	15	3.68E-05	2.4 U	0.00E+00	3	7.21E-06	8.4	2.02E-05	2.4 U	0.00E+00	17	6.99E-05
11/14/2014		33847	14294	160	180	5.96E-04	1.2 U	0.00E+00	5.2	1.28E-05	1.2 U	0.00E+00	3	9.93E-06	25	6.01E-05	1.2 U	0.00E+00	18	7.40E-05
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	220	7.28E-04	1.1 U	0.00E+00	4.7	1.15E-05	1.1 U	0.00E+00	2.2	5.29E-06	18	4.33E-05	1.1 U	0.00E+00	11	4.52E-05
3/13/2015		35189	15099	160	200	6.62E-04	1.2 U	0.00E+00	4.4	1.08E-05	1.2 U	0.00E+00	3.1	1.03E-05	14	3.37E-05	1.2 U	0.00E+00	4.2	1.73E-05
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	300	9.93E-04	1.2 U	0.00E+00	5.6	1.37E-05	1.2 U	0.00E+00	3.1	7.45E-06	10	2.40E-05	1.2 U	0.00E+00	8.1	3.33E-05
7/16/2015		36677	15992	160	180	5.96E-04	1.2 U	0.00E+00	6.5	1.60E-05	1.2 U	0.00E+00	2.3	7.61E-06	19	4.57E-05	1.2 U	0.00E+00	6	2.47E-05
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	530	1.75E-03	2.3 U	0.00E+00	11	2.70E-05	2.3 U	0.00E+00	2.6	6.25E-06	10	2.40E-05	2.3 U	0.00E+00	18	7.40E-05
11/20/2015		38094	16842	160	64	2.12E-04	1.1 U	0.00E+00	3.2	7.86E-06	1.1 U	0.00E+00	1.2	2.89E-06	5.4	1.30E-05	1.1 U	0.00E+00	7.3	3.00E-05
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	68	2.25E-04	1.1 U	0.00E+00	2.6	6.38E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.13E-06	1.1 U	0.00E+00	12	4.94E-05
3/18/2016		39377	17612	160	66	2.18E-04	1.1 U	0.00E+00	2.4	5.89E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.8	9.14E-06	1.1 U	0.00E+00	2.7	1.11E-05
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	240	7.94E-04	1.1 U	0.00E+00	110	2.70E-04	1.1 U	0.00E+00	2.7	6.49E-06	3.7	8.90E-06	1.1 U	0.00E+00	6.4	2.63E-05
7/22/2016		40915	17921	160	120	3.97E-04	1.3 U	0.00E+00	5.2	1.28E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	9.7	2.33E-05	1.3 U	0.00E+00	9.6	3.95E-05
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	220	7.28E-04	1.2 U	0.00E+00	5.1	1.25E-05	1.2 U	0.00E+00	1.5	3.61E-06	3.9	9.38E-06	1.2 U	0.00E+00	15	6.17E-05
11/28/2016		42571	18915	160	19	6.29E-05	1.0 U	0.00E+00	1.6	3.93E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	7.2	2.96E-05
Pulse -off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	42	1.48E-04	1.1 U	0.00E+00	1.9	4.96E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	2.7	1.18E-05
3/23/2017		43840	19676	160	130	4.30E-04	1.3 U	0.00E+00	4.1	1.01E-05	1.3 U	0.00E+00	1.8	4.33E-06	9.2	2.21E-05	1.3 U	0.00E+00	2.8	1.15E-05
Pulse -off period March 23, 2017 to May 15, 2017																				

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse-off period November 18, 2013 to January 15, 2014																				
1/15/2014		28218	10916	160	7.6	2.48E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		29432	11645	160	8.1	2.64E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period March 14, 2014 to May 15, 2014																				
5/15/2014		29914	11934	160	20	6.52E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
7/23/2014		31567	12926	160	9	2.93E-05	1.4 U	0.00E+00	14 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	5.6 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00
Pulse-off period July 23, 2014 to September 16, 2014																				
9/16/2014		32432	13445	160	14	4.56E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	3	5.81E-06	2.4 U	0.00E+00
11/14/2014		33847	14294	160	6.2	2.02E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period November 14, 2014 to January 9, 2015																				
1/9/2015		33855	14299	160	6	1.96E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		35189	15099	160	14	4.56E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period March 13, 2015 to May 15, 2015																				
5/15/2015		35194	15102	160	10	3.26E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
7/16/2015		36677	15992	160	12	3.91E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
Pulse-off period July 16, 2015 to September 22, 2015																				
9/22/2015		36680	15994	160	14	4.56E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00
11/20/2015		38094	16842	160	14	4.56E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period November 20, 2015 to January 19, 2016																				
1/19/2016		38101	16846	160	7	2.15E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		39377	17612	160	11	3.59E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
Pulse-off period March 18, 2016 to May 19, 2016																				
5/19/2016		39382	17615	160	4.2	1.37E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		40915	17921	160	9	2.93E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00
Pulse-off period July 22, 2016 to September 20, 2016																				
9/20/2016		40918	17923	160	8.5	2.77E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		42571	18915	160	2.3	7.50E-06	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00
Pulse-off period November 28, 2016 to January 24, 2017																				
1/24/2017		42575	18917	170	2.7	9.35E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		43840	19676	160	6.1	1.99E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00</td

Table 4.3
Cell 3 - Phase 1 SVE System Effluent Data
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 3 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 3 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period	November 18, 2013 to January 15, 2014															
1/15/2014		28218	10916	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	9.57E-04	136.88
3/14/2014		29432	11645	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.48E-04	137.13
Pulse-off period	March 14, 2014 to May 15, 2014															
5/15/2014		29914	11934	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	2.92E-03	137.98
7/23/2014		31567	12926	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.6 U	0.00E+00	5.42E-04	138.52
Pulse-off period	July 23, 2014 to September 16, 2014															
9/16/2014		32432	13445	160	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	1.48E-03	139.28
11/14/2014		33847	14294	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12	1.73E-05	4.6 U	0.00E+00	7.90E-04	139.95
Pulse-off period	November 14, 2014 to January 9, 2015															
1/9/2015		33855	14299	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	8.53E-04	139.96
3/13/2015		35189	15099	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	7.79E-04	140.58
Pulse-off period	March 13, 2015 to May 15, 2015															
5/15/2015		35194	15102	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.10E-03	140.58
7/16/2015		36677	15992	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.29E-04	141.23
Pulse-off period	July 16, 2015 to September 22, 2015															
9/22/2015		36680	15994	160	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	23 U	0.00E+00	9.3 U	0.00E+00	1.93E-03	141.24
11/20/2015		38094	16842	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	3.11E-04	141.50
Pulse-off period	November 20, 2015 to January 19, 2016															
1/19/2016		38101	16846	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.05E-04	141.50
3/18/2016		39377	17612	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.80E-04	141.72
Pulse-off period	March 18, 2016 to May 19, 2016															
5/19/2016		39382	17615	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.12E-03	141.72
7/22/2016		40915	17921	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	5.02E-04	141.87
Pulse-off period	July 22, 2016 to September 20, 2016															
9/20/2016		40918	17923	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	8.43E-04	141.87
11/28/2016		42571	18915	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	1.04E-04	141.98
Pulse-off period	November 28, 2016 to January 24, 2017															
1/24/2017		42575	18917	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.74E-04	141.98
3/23/2017		43840	19676	160	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	4.98E-04	142.36
Pulse-off period	March 23, 2017 to May 15, 2017															
5/15/2017		43846	19680	160	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.2 U	0.00E+00	4.51E-04	142.36
7/20/2017		45423	20626	170	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	3.71E-04	142.71
Pulse-off period	July 20, 2017 to September 14, 2017															
9/14/2017		45432	20632	160	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	4.68E-04	142.71
11/17/2017		46966	21552	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.94E-04	142.89
Pulse-off period	November 17, 2017 to January 22, 2018															
1/22/2018		46970	21554	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.55E-04	142.89
3/23/2018		48239	22316	160	1.4 U	0.00E+00	1.4 U	0.00E+00	1.4 U	0.00E+00	14 U	0.00E+00	5.4 U	0.00E+00	1.43E-04	143.00
Pulse-off period	March 23, 2018 to May 21, 2018															
5/21/2018		48242	22318	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.13E-04	143.00

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

SCFM standard cubic feet per minute

J Indicates estimated value.

³ Indicates estimated value.
— The analyte was detected in

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was col-

When a duplicate sample was collected, the original sample results are used in the mass calculations.

are used in the mass calculations.

See notes on last page.
2018 Q2 Tables 4.1-4.6 Air.xlsx Tbl 4.3 C-3

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	150000	1.55E+00	600 U	0.00E+00	1800	1.38E-02	600 U	0.00E+00	860	6.46E-03	1400	1.05E-02	600 U	0.00E+00
3/18/2011		366	366	500	41000	4.24E-01	150 U	0.00E+00	1000	7.67E-03	150 U	0.00E+00	250	1.88E-03	460	3.46E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	40000	4.14E-01	130 U	0.00E+00	1000	7.67E-03	130 U	0.00E+00	300	2.25E-03	480	3.61E-03	130 U	0.00E+00
3/25/2011		463	463	500	22000	2.28E-01	62 U	0.00E+00	980	7.52E-03	62 U	0.00E+00	87	6.54E-04	290	2.18E-03	62 U	0.00E+00
3/30/2011		558	558	500	25000	2.59E-01	68 U	0.00E+00	820	6.29E-03	68 U	0.00E+00	190	1.43E-03	290	2.18E-03	68 U	0.00E+00
4/8/2011		764	764	500	22000	2.28E-01	80 U	0.00E+00	1000	7.67E-03	80 U	0.00E+00	170	1.28E-03	340	2.56E-03	80 U	0.00E+00
4/15/2011		924	924	500	18000	1.86E-01	84 U	0.00E+00	930	7.13E-03	84 U	0.00E+00	110	8.27E-04	280	2.10E-03	84 U	0.00E+00
4/15/2011	Dup	924	924	500	16000 J	1.65E-01	60 U	0.00E+00	820 J	6.29E-03	60 U	0.00E+00	60 UJ	0.00E+00	260 J	1.95E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	11000	1.14E-01	11 U	0.00E+00	640	4.91E-03	11 U	0.00E+00	100	7.52E-04	190	1.43E-03	11 U	0.00E+00
6/16/2011		2191	2191	420	10000	8.69E-02	11 U	0.00E+00	530	3.42E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
6/16/2011	Dup	2191	2191	420	9600	8.34E-02	11 U	0.00E+00	510	3.29E-03	11 U	0.00E+00	110 J	6.94E-04	160	1.01E-03	11 U	0.00E+00
7/15/2011		2750	2750	420	7600	6.60E-02	24 U	0.00E+00	290	1.87E-03	24 U	0.00E+00	58	3.66E-04	79	4.99E-04	24 U	0.00E+00
8/22/2011		3133	3133	420	9000	7.82E-02	27 U	0.00E+00	410	2.64E-03	27 U	0.00E+00	92	5.81E-04	160	1.01E-03	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	9000	7.82E-02	22 U	0.00E+00	400	2.58E-03	22 U	0.00E+00	80	5.05E-04	150	9.47E-04	22 U	0.00E+00
9/15/2011		3630	3630	420	7000	6.08E-02	22 U	0.00E+00	250	1.61E-03	22 U	0.00E+00	55	3.47E-04	97	6.12E-04	22 U	0.00E+00
10/14/2011		4226	4226	420	4400	3.82E-02	19 U	0.00E+00	180	1.16E-03	19 U	0.00E+00	59	3.72E-04	60	3.79E-04	19 U	0.00E+00
11/21/2011		5019	5019	380	3700	2.91E-02	16 U	0.00E+00	170	9.91E-04	16 U	0.00E+00	320	1.83E-03	63	3.60E-04	16 U	0.00E+00
12/14/2011		5343	5343	260	4000	2.15E-02	19 U	0.00E+00	140	5.58E-04	19 U	0.00E+00	300	1.17E-03	55	2.15E-04	19 U	0.00E+00
1/19/2012		5993	5993	0	5200	0.00E+00	24 U	0.00E+00	160	0.00E+00	24 U	0.00E+00	58	0.00E+00	38	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	4200	2.26E-02	19 U	0.00E+00	100	3.99E-04	19 U	0.00E+00	700	2.74E-03	53	2.07E-04	19 U	0.00E+00
3/15/2012		6946	6946	350	4000	2.90E-02	15 U	0.00E+00	120	6.44E-04	15 U	0.00E+00	38	2.00E-04	38	2.00E-04	15 U	0.00E+00
4/19/2012		7629	7629	380	5200	4.09E-02	16 U	0.00E+00	160	9.33E-04	16 U	0.00E+00	42	2.40E-04	43	2.46E-04	16 U	0.00E+00
5/16/2012		8143	8143	420	4100	3.56E-02	15 U	0.00E+00	110	7.09E-04	15 U	0.00E+00	43	2.71E-04	40	2.53E-04	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	5000	4.34E-02	16 U	0.00E+00	98	6.32E-04	16 U	0.00E+00	66	4.17E-04	27	1.70E-04	16 U	0.00E+00
9/17/2012		9033	9033	470	3700	3.60E-02	15 U	0.00E+00	140	1.01E-03	15 U	0.00E+00	15 U	0.00E+00	26	1.84E-04	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																		
11/15/2012		9037	9037	420	4900 J	4.26E-02	28 U	0.00E+00	74 J	4.77E-04	28 U	0.00E+00	110 J	6.94E-04	29 J	1.83E-04	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	8700	7.56E-02	24 U	0.00E+00	200 J	1.29E-03	24 U	0.00E+00	220	1.39E-03	360 J	2.27E-03	24 U	0.00E+00
12/14/2012		9439	9439	150	500	1.55E-03	1.9 U	0.00E+00	14	3.22E-05	1.9 U	0.00E+00	6.8	1.53E-05	18	4.06E-05	1.9 U	0.00E+00
Pulse -off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	520	0.00E+00	2.2 U	0.00E+00	23	0.00E+00	2.2 U	0.00E+00	5.7	0.00E+00	28	0.00E+00	2.2 U	0.00E+00
4/11/2013		9876	9876	340	430	3.02E-03	1.8 U	0.00E+00	26	1.36E-04	1.8 U	0.00E+00	7.1	3.63E-05	28	1.43E-04	1.8 U	0.00E+00
Pulse -off period April 11, 2013 to May 10, 2013																		
5/10/2013		9882	9882	340	270	1.90E-0												

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011		222	222	500	7200	9.26E-02	3900	3.97E-02	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	600 U	0.00E+00	2400 U	0.00E+00	600 U	0.00E+00
3/18/2011		366	366	500	2900	3.73E-02	1600	1.63E-02	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	150 U	0.00E+00	750 J	3.75E-03	150 U	0.00E+00
3/18/2011	Dup	366	366	500	3000	3.86E-02	1600	1.63E-02	130 UJ	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	130 U	0.00E+00	1100 J	5.50E-03	130 U	0.00E+00
3/25/2011		463	463	500	3200	4.11E-02	970	9.88E-03	62 U	0.00E+00	61 NJ	4.02E-04	62 U	0.00E+00	62 U	0.00E+00	610	3.05E-03	62 U	0.00E+00
3/30/2011		558	558	500	2500	3.21E-02	1000	1.02E-02	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	68 U	0.00E+00	470	2.35E-03	68 U	0.00E+00
4/8/2011		764	764	500	2400	3.09E-02	1000	1.02E-02	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	80 U	0.00E+00	430	2.15E-03	80 U	0.00E+00
4/15/2011		924	924	500	1700	2.19E-02	920	9.37E-03	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	84 U	0.00E+00	340 U	0.00E+00	84 U	0.00E+00
4/15/2011	Dup	924	924	500	1500 J	1.93E-02	830 J	8.45E-03	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	60 U	0.00E+00	260 J	1.30E-03	60 U	0.00E+00
5/19/2011		1685	1685	500	1400	1.80E-02	530	5.40E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	67	3.35E-04	26	1.57E-04
6/16/2011		2191	2191	420	1000	1.08E-02	410	3.51E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	46 U	0.00E+00	14	7.12E-05
6/16/2011	Dup	2191	2191	420	960	1.04E-02	400	3.42E-03	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	45 U	0.00E+00	12	6.10E-05
7/15/2011		2750	2750	420	570	6.16E-03	250	2.14E-03	24 U	0.00E+00	28	1.55E-04	24 U	0.00E+00	24 U	0.00E+00	95 U	0.00E+00	24 U	0.00E+00
8/22/2011		3133	3133	420	920	9.93E-03	380	3.25E-03	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	27 U	0.00E+00	110 U	0.00E+00	27 U	0.00E+00
8/22/2011	Dup	3133	3133	420	940	1.02E-02	360	3.08E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
9/15/2011		3630	3630	420	660	7.13E-03	270	2.31E-03	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	22 U	0.00E+00	90 U	0.00E+00	22 U	0.00E+00
10/14/2011		4226	4226	420	390	4.21E-03	180	1.54E-03	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	77 U	0.00E+00	19 U	0.00E+00
11/21/2011		5019	5019	380	360	3.52E-03	180	1.39E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
12/14/2011		5343	5343	260	360	2.41E-03	160	8.47E-04	19 U	0.00E+00	190 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	74 U	0.00E+00	19 U	0.00E+00
1/19/2012		5993	5993	0	320	0.00E+00	180	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	97 U	0.00E+00	24 U	0.00E+00
2/15/2012		6368	6368	260	280	1.87E-03	150	7.94E-04	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	19 U	0.00E+00	78 U	0.00E+00	19 U	0.00E+00
3/15/2012		6946	6946	350	240	2.16E-03	140	9.98E-04	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	58 U	0.00E+00	15 U	0.00E+00
4/19/2012		7629	7629	380	400	3.91E-03	180	1.39E-03	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	62 U	0.00E+00	16 U	0.00E+00
5/16/2012		8143	8143	420	320	3.46E-03	150	1.28E-03	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012		8546	8546	420	490	5.29E-03	180	1.54E-03	16 U	0.00E+00	160 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	63 U	0.00E+00	16 U	0.00E+00
9/17/2012		9033	9033	470	410	4.95E-03	220	2.11E-03	15 U	0.00E+00	150 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	61 U	0.00E+00	15 U	0.00E+00
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012		9037	9037	420	260 J	2.81E-03	150 J	1.28E-03	28 U	0.00E+00	280 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	110 U	0.00E+00	28 U	0.00E+00
11/15/2012	Dup	9037	9037	420	1200 J	1.30E-02	390 J	3.34E-03	24 U	0.00E+00	240 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	94 U	0.00E+00	24 U	0.00E+00
12/14/2012		9439	9439	150	62	2.39E-04	28	8.56E-05	1.9 U	0.00E+00	19 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00				

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011	Dup	222	222	500	600 U	0.00E+00	600 U	0.00E+00	710	5.84E-03	600 U	0.00E+00	2400 U	0.00E+00	2400 U	0.00E+00	1.72E+00	381.87
3/18/2011		366	366	500	620 J	4.43E-03	150 U	0.00E+00	240	1.98E-03	200	1.65E-03	1500 J	6.75E-03	590 U	0.00E+00	5.09E-01	453.50
3/18/2011		366	366	500	380 J	2.71E-03	130 U	0.00E+00	250	2.06E-03	240	1.98E-03	690 J	3.11E-03	540 U	0.00E+00	4.97E-01	453.50
3/25/2011		463	463	500	140	1.00E-03	62 U	0.00E+00	78	6.42E-04	67	5.51E-04	250 U	0.00E+00	250 U	0.00E+00	2.95E-01	482.07
3/30/2011		558	558	500	190	1.36E-03	68 U	0.00E+00	250	2.06E-03	140	1.15E-03	270 U	0.00E+00	270 U	0.00E+00	3.18E-01	512.25
4/8/2011		764	764	500	200	1.43E-03	120	9.88E-04	560	4.61E-03	260	2.14E-03	320 U	0.00E+00	320 U	0.00E+00	2.91E-01	572.27
4/15/2011		924	924	500	170	1.21E-03	110	9.05E-04	540	4.44E-03	260	2.14E-03	340 U	0.00E+00	340 U	0.00E+00	2.36E-01	610.05
4/15/2011		924	924	500	140 J	1.00E-03	99 J	8.15E-04	540 J	4.44E-03	230 J	1.89E-03	240 J,B	1.08E-03	240 U	0.00E+00	2.12E-01	610.05
5/19/2011		1685	1685	500	100	7.14E-04	140	1.15E-03	920	7.57E-03	420	3.46E-03	81	3.65E-04	43 U	0.00E+00	1.58E-01	730.28
6/16/2011		2191	2191	420	51	3.06E-04	83	5.74E-04	600	4.15E-03	280	1.94E-03	46 J,B	1.74E-04	46 U	0.00E+00	1.14E-01	753.86
6/16/2011		2191	2191	420	53	3.18E-04	78	5.39E-04	580	4.01E-03	270	1.87E-03	69 J,B	2.61E-04	45 U	0.00E+00	1.09E-01	785.55
7/15/2011		2750	2750	420	28	1.68E-04	41	2.83E-04	270	1.87E-03	120	8.30E-04	180	6.81E-04	95 U	0.00E+00	8.10E-02	830.85
8/22/2011		3133	3133	420	35 J	2.10E-04	59 J	4.08E-04	340	2.35E-03	140	9.68E-04	110 U	0.00E+00	110 U	0.00E+00	9.95E-02	868.97
8/22/2011		3133	3133	420	22 UJ	0.00E+00	30 J	2.07E-04	310	2.14E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	9.87E-02	868.65
9/15/2011		3630	3630	420	22 U	0.00E+00	31	2.14E-04	340	2.35E-03	130	8.99E-04	90 U	0.00E+00	90 U	0.00E+00	7.63E-02	906.88
10/14/2011		4226	4226	420	38	2.28E-04	19 U	0.00E+00	170	1.18E-03	70	4.84E-04	77 U	0.00E+00	77 U	0.00E+00	4.78E-02	935.35
11/21/2011		5019	5019	380	16 U	0.00E+00	17	1.06E-04	220	1.38E-03	100	6.25E-04	160 U	0.00E+00	63 U	0.00E+00	3.93E-02	966.50
12/14/2011		5343	5343	260	19 U	0.00E+00	19 U	0.00E+00	76	3.25E-04	55	2.35E-04	190 UU	0.00E+00	74 U	0.00E+00	2.73E-02	975.34
1/19/2012		5993	5993	0	36	0.00E+00	24 U	0.00E+00	78	0.00E+00	50	0.00E+00	97 U	0.00E+00	97 U	0.00E+00	0.00E+00	975.34
2/15/2012		6368	6368	260	19 U	0.00E+00	19 U	0.00E+00	58	2.48E-04	40	1.71E-04	300	7.02E-04	78 U	0.00E+00	2.97E-02	986.48
3/15/2012		6946	6946	350	15 U	0.00E+00	15 U	0.00E+00	44	2.53E-04	31	1.79E-04	58 U	0.00E+00	58 U	0.00E+00	3.36E-02	1005.89
4/19/2012		7629	7629	380	16 U	0.00E+00	16 U	0.00E+00	48	3.00E-04	33	2.06E-04	62 U	0.00E+00	62 U	0.00E+00	4.81E-02	1038.74
5/16/2012		8143	8143	420	15 U	0.00E+00	15 U	0.00E+00	28	1.94E-04	23	1.59E-04	61 U	0.00E+00	61 U	0.00E+00	4.19E-02	1060.30
Pulse-off period June 1, 2012 to August 14, 2012																		
8/14/2012		8546	8546	420	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	160 U	0.00E+00	63 U	0.00E+00	5.15E-02	1081.05
9/17/2012		9033	9033	470	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	150 U	0.00E+00	61 U	0.00E+00	4.42E-02	1102.58
Pulse-off period September 17, 2012 to November 15, 2012																		
11/15/2012	Dup	9037	9037	420	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	28 U	0.00E+00	280 U	0.00E+00	110 U	0.00E+00	4.80E-02	1102.78
11/15/2012		9037	9037	420	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	24 U	0.00E+00	240 U	0.00E+00	94 U	0.00E+00	9.68E-02	-
12/14/2012		9439	9439	150	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	1.9 U	0.00E+00	19 U	0.00E+00	7.5 U	0.00E+00	1.96E-03	1103.57
Pulse-off period December 14, 2012 to February 26, 2013																		
2/26/2013		9439	9439	0	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.7 U	0.00E+00	0.00E+00	1103.57
4/11/2013		9876	9876	340	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	1.8 U	0.00E+00	18 U	0.00E+00	7.1 U	0.00E+00	4.37E-03	1105.48
Pulse-off period April 11, 2013 to May 10, 2013</																		

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT																		
Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	200	1.32E-03	1.2 U	0.00E+00	5.5	2.70E-05	1.2 U	0.00E+00	3.3	1.59E-05	9.6	4.62E-05	1.2 U	0.00E+00
3/14/2014		12980	12980	180	430	1.60E-03	2.6 U	0.00E+00	6.2	1.71E-05	2.6 U	0.00E+00	8.2	2.22E-05	18	4.87E-05	2.6 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	470	1.75E-03	1.1 U	0.00E+00	10	2.76E-05	1.1 U	0.00E+00	6.9	1.87E-05	22	5.95E-05	1.1 U	0.00E+00
7/23/2014		14627	14627	300	14	8.69E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.6	0.00E+00	1.3 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	150	9.93E-04	1.2 U	0.00E+00	9	4.42E-05	1.2 U	0.00E+00	1.7	8.18E-06	15	7.21E-05	1.2 U	0.00E+00
11/14/2014		16008	16008	320	220	1.46E-03	0.96 U	0.00E+00	5	2.45E-05	0.96 U	0.00E+00	3.6	1.73E-05	8.9	4.28E-05	0.96 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	150	8.07E-04	1.1 U	0.00E+00	4.1	1.64E-05	1.1 U	0.00E+00	2.2	8.60E-06	7.4	2.89E-05	1.1 U	0.00E+00
3/13/2015		17178	17178	220	190	8.65E-04	1.2 U	0.00E+00	4.9	1.65E-05	1.2 U	0.00E+00	3.1	1.03E-05	5.5	1.82E-05	1.2 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	180	1.19E-03	2.6 U	0.00E+00	4.3	2.11E-05	2.6 U	0.00E+00	2.8	1.35E-05	5.2	2.50E-05	2.6 U	0.00E+00
7/16/2015		18436	18436	310	270	1.73E-03	1.2 U	0.00E+00	7.7	3.66E-05	1.2 U	0.00E+00	4	1.86E-05	13	6.06E-05	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	200	1.24E-03	1.1 U	0.00E+00	6.3	2.90E-05	1.1 U	0.00E+00	2.1	9.47E-06	11	4.96E-05	1.1 U	0.00E+00
11/20/2015		19832	19832	530	170	1.86E-03	1.2 U	0.00E+00	7	5.69E-05	1.2 U	0.00E+00	2.6	2.07E-05	12	9.56E-05	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	39	3.07E-04	1.1 U	0.00E+00	1.7	9.91E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	3.4	1.94E-05	1.1 U	0.00E+00
3/18/2016		21088	21088	420	88	7.64E-04	1.1 U	0.00E+00	5	3.22E-05	1.1 U	0.00E+00	1.2	7.57E-06	6.8	4.29E-05	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	9.3	3.46E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	14	5.21E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.6	4.33E-06	1.1 U	0.00E+00
7/22/2016		22610	22610	230	33	1.57E-04	1.0 U	0.00E+00	1.9	6.70E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	1.21E-05	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	33	1.23E-04	1.0 U	0.00E+00	1.9	5.25E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	3.5	9.47E-06	1.0 U	0.00E+00
11/28/2016		24162	24162	100	17	3.52E-05	1.1 U	0.00E+00	1.7	2.61E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.9	2.86E-06	1.1 U	0.00E+00

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period	November 18, 2013 to March 14, 2014																			
1/15/2014		11997	11997	320	51	4.20E-04	11	7.17E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
3/14/2014		12980	12980	180	7.8	3.61E-05	14	5.13E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
Pulse -off period	March 14, 2014 to May 15, 2014																			
5/15/2014		12986	12986	180	38	1.76E-04	17	6.23E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00
7/23/2014		14627	14627	300	15	1.16E-04	2.4	1.47E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period	July 23, 2014 to September 16, 2014																			
9/16/2014		14634	14628	320	200	1.65E-03	39	2.54E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	2	7.75E-06
11/14/2014		16008	16008	320	69	5.68E-04	12	7.82E-05	0.96 U	0.00E+00	9.6 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	3.8 U	0.00E+00	0.96 U	0.00E+00
Pulse -off period	November 14, 2014 to January 9, 2015																			
1/9/2015		16015	16015	260	50	3.34E-04	11	5.83E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17178	17178	220	27	1.53E-04	6.9	3.09E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.8 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period	March 13, 2015 to May 15, 2015																			
5/15/2015		17186	17186	320	45	3.70E-04	9.8	6.39E-05	2.6 U	0.00E+00	26 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	10 U	0.00E+00	2.6 U	0.00E+00
7/16/2015		18436	18436	310	130	1.04E-03	27	1.71E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period	July 16, 2015 to September 22, 2015																			
9/22/2015		18439	18439	300	200	1.54E-03	36	2.20E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
11/20/2015		19832	19832	530	120	1.64E-03	23	2.48E-04	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	5.0 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period	November 20, 2015 to January 19, 2016																			
1/19/2016		19841	19841	380	62	6.06E-04	11	8.51E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21088	21088	420	52	5.62E-04	11	9.41E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period	March 18, 2016 to May 19, 2016																			
5/19/2016		21092	21092	180	14	6.48E-05	2.4	8.80E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
5/19/2016	Dup	21092	21092	180	21	9.72E-05	3.9	1.43E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
7/22/2016		22610	22610	230	39	2.31E-04	7.5	3.51E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period	July 22, 2016 to September 20, 2016																			
9/20/2016*		22611	22611	180	39	1.80E-04	7.5	2.75E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.2 U	0.00E+00	1.0 U	0.00E+00
11/28/2016		24162	24162	100	14	3.60E-05	2.8	5.70E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.4 U	0.00E+00	1.1 U	0.00E+00

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period November 18, 2013 to March 14, 2014																		
1/15/2014		11997	11997	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.90E-03	1110.91
3/14/2014		12980	12980	180	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.78E-03	1112.65
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		12986	12986	180	3.9	1.00E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	2.10E-03	1112.67
7/23/2014		14627	14627	300	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	2.17E-04	1113.02
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14634	14628	320	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	21	6.05E-05	4.9 U	0.00E+00	3.09E-03	1113.03
11/14/2014		16008	16008	320	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	0.96 U	0.00E+00	9.6 U	0.00E+00	3.8 U	0.00E+00	2.19E-03	1116.04
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16015	16015	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	1.25E-03	1116.05
3/13/2015		17178	17178	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	1.09E-03	1117.32
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17186	17186	320	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	2.6 U	0.00E+00	26 U	0.00E+00	10 U	0.00E+00	1.68E-03	1117.34
7/16/2015		18436	18436	310	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	3.05E-03	1121.16
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18439	18439	300	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.09E-03	1121.16
11/20/2015		19832	19832	530	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	3.92E-03	1126.63
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19841	19841	380	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.03E-03	1126.63
3/18/2016		21088	21088	420	2.7	1.62E-05	1.1 U	0.00E+00	9.7	6.71E-05	4.1	2.83E-05	11 U	0.00E+00	4.5 U	0.00E+00	1.61E-03	1128.65
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.08E-04	1128.65
5/19/2016	Dup	21092	21092	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	1.68E-04	-
7/22/2016		22610	22610	230	1.2	3.94E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	3.73E-05	4.2 U	0.00E+00	4.83E-04	1129.38
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016*		22611	22611	180	1.2	3.09E-06	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	18	2.92E-05	4.2 U	0.00E+00	3.78E-04	1129.38
11/28/2016		24162	24162	100	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	8.23E-05	1129.51

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT																
Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017		24166	24166	220	19	8.65E-05	1.1 U	0.00E+00	1.5	5.06E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06
1/24/2017	Dup	24166	24166	220	22	1.00E-04	1.1 U	0.00E+00	1.7	5.74E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.5	4.96E-06
3/23/2017		25427	25427	190	55	2.16E-04	1.2 U	0.00E+00	4.1	1.20E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.4	9.71E-06
Pulse -off period March 23, 2017 to May 15, 2017																
5/15/2017		25452	25452	180	25	9.31E-05	1.2 U	0.00E+00	1.6	4.42E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	2	5.41E-06
7/20/2017		26992	26992	410	100	8.48E-04	2.2 U	0.00E+00	5.6	3.52E-05	2.2 U	0.00E+00	2.2 U	0.00E+00	9.4	5.79E-05
Pulse -off period July 20, 2017 to September 14, 2017																
9/14/2017		27001	27001	420	120	1.04E-03	1.0 U	0.00E+00	5	3.22E-05	1.0 U	0.00E+00	1.0 U	0.00E+00	6.4	4.04E-05
9/14/2017	Dup	-	-	-	120	-	1.0 U	-	5.1	-	1.0 U	-	1.0 U	-	6.6	-
11/17/2017		28486	28486	480	78	7.74E-04	1.1 U	0.00E+00	4.3	3.17E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	4.9	3.54E-05
Pulse -off period November 17, 2017 to January 22, 2018																
1/22/2018		28489	28489	460	63	5.99E-04	1.2 U	0.00E+00	2.5	1.76E-05	1.2 U	0.00E+00	1.2 U	0.00E+00	3.0	2.07E-05
3/23/2018		29726	29726	440	53	4.82E-04	1.3 U	0.00E+00	5.5	3.71E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	3.8	2.51E-05
Pulse -off period March 23, 2018 to May 21, 2018																
5/21/2018		29731	29731	410	39	3.31E-04	1.3 U	0.00E+00	3	1.89E-05	1.3 U	0.00E+00	1.3 U	0.00E+00	2.5	1.54E-05
5/21/2018	Dup	-	-	-	40	-	1.2 U	-	3.2	-	1.2 U	-	1.2 U	-	2.4	-

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Tetrachloroethene		Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period	November 28, 2016 to January 24, 2017			7																
1/24/2017		24166	24166	220	18	1.02E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
1/24/2017	Dup	24166	24166	220	19	1.07E-04	4	1.79E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/23/2017		25427	25427	190	20	9.77E-05	4.5	1.74E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period	March 23, 2017 to May 15, 2017																			
5/15/2017		25452	25452	180	21	9.72E-05	4.1	1.50E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		26992	26992	410	150	1.58E-03	28	2.34E-04	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	8.6 U	0.00E+00	2.2 U	0.00E+00
Pulse -off period	July 20, 2017 to September 14, 2017																			
9/14/2017		27001	27001	420	240	2.59E-03	46	3.94E-04	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00
9/14/2017	Dup	-	-	-	240	-	46	-	1.0 U	-	11 U	-	1.0 U	-	1.0 U	-	4.5 U	-	1.0 U	-
11/17/2017		28486	28486	480	69	8.52E-04	16	1.56E-04	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period	November 17, 2017 to January 22, 2018																			
1/22/2018		28489	28489	460	45	5.32E-04	9.9	9.28E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
3/23/2018		29726	29726	440	39	4.41E-04	8.3	7.44E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.0 U	0.00E+00	1.3 U	0.00E+00
Pulse -off period	March 23, 2018 to May 21, 2018																			
5/21/2018		29731	29731	410	45	4.74E-04	9	7.52E-05	1.3 U	0.00E+00	13 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	5.2 U	0.00E+00	1.3 U	0.00E+00
5/21/2018	Dup	-	-	-	47	-	9.3	-	1.2 U	-	12 U	-	1.2 U	-	1.2 U	-	4.9 U	-	1.2 U	-

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.4
Cell 4 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 4 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 4 Run Time (hr)	SVE Flow Rate (scfm)	Toluene		Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse-off period November 28, 2016 to January 24, 2017					1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.16E-04	1129.51
1/24/2017	Dup	24166	24166	220	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.36E-04	-
1/24/2017		24166	24166	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.53E-04	1129.95
Pulse-off period March 23, 2017 to May 15, 2017																		
5/15/2017		25452	25452	180	2.1	5.40E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	2.21E-04	1129.96
7/20/2017		26992	26992	410	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	8.6 U	0.00E+00	2.76E-03	1134.20
Pulse-off period July 20, 2017 to September 14, 2017																		
9/14/2017	Dup	27001	27001	420	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.1 U	0.00E+00	4.10E-03	1134.24
9/14/2017		-	-	-	1.0 U	-	1.0 U	-	1.0 U	-	1.0 U	-	11 U	-	4.5 U	-	-	-
11/17/2017		28486	28486	480	1.6	1.10E-05	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	1.86E-03	1137.00
Pulse-off period November 17, 2017 to January 22, 2018																		
1/22/2018		28489	28489	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	1.27E-03	1137.01
3/23/2018		29726	29726	440	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.0 U	0.00E+00	1.06E-03	1138.32
Pulse-off period March 23, 2018 to May 21, 2018																		
5/21/2018	Dup	29731	29731	410	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	1.3 U	0.00E+00	13 U	0.00E+00	5.2 U	0.00E+00	9.15E-04	1138.32
5/21/2018		-	-	-	1.2	-	1.2 U	-	1.2 U	-	1.2 U	-	12 U	-	4.9 U	-	-	-

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

*A sample could not be collected in September 2016 due to insufficient vacuum in the summa can. The sample results from July 22, 2016 are shown (*in italics*) for September 20, 2016 and are used in calculations.

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011	Dup	218	218	360	28000	2.08E-01	100 U	0.00E+00	2400	1.33E-02	100 U	0.00E+00	740	4.00E-03	10000	5.41E-02	100 U	0.00E+00	5900	5.46E-02
3/18/2011		362	362	360	13000	9.68E-02	52 U	0.00E+00	1100	6.08E-03	52 U	0.00E+00	280	1.52E-03	4800	2.60E-02	52 U	0.00E+00	6800	6.29E-02
3/25/2011		459	459	360	8900	6.63E-02	30 U	0.00E+00	650	3.59E-03	30 U	0.00E+00	200	1.08E-03	2600	1.41E-02	30 U	0.00E+00	5400	5.00E-02
3/30/2011		553	553	360	4600	3.43E-02	13 U	0.00E+00	310	1.71E-03	13 U	0.00E+00	100	5.41E-04	1300	7.03E-03	13 U	0.00E+00	4000	3.70E-02
4/8/2011		759	759	360	4600	3.43E-02	20 U	0.00E+00	330	1.82E-03	20 U	0.00E+00	95	5.14E-04	1100	5.95E-03	20 U	0.00E+00	5700	5.28E-02
4/15/2011		920	920	360	4600	3.43E-02	20 U	0.00E+00	370	2.04E-03	20 U	0.00E+00	69	3.73E-04	980	5.30E-03	20 U	0.00E+00	4600	4.26E-02
5/19/2011		1681	1681	330	2800	1.91E-02	12 U	0.00E+00	250	1.27E-03	12 U	0.00E+00	34	1.69E-04	730	3.62E-03	12 U	0.00E+00	7800	6.62E-02
6/16/2011		2187	2187	300	1800	1.12E-02	7.8 U	0.00E+00	170	7.82E-04	7.8 U	0.00E+00	23 J	1.04E-04	520	2.34E-03	7.8 U	0.00E+00	2400	1.85E-02
7/15/2011		2745	2745	220	2400	1.09E-02	7.6 U	0.00E+00	180	6.08E-04	7.6 U	0.00E+00	27	8.93E-05	840	2.78E-03	7.6 U	0.00E+00	2700	1.53E-02
8/22/2011		3129	3129	260	1700	9.14E-03	5.0 U	0.00E+00	150	5.98E-04	5.0 U	0.00E+00	21	8.21E-05	690	2.70E-03	5.0 U	0.00E+00	2000	1.34E-02
9/15/2011		3626	3626	220	1400	6.37E-03	4.5 U	0.00E+00	69	2.33E-04	4.5 U	0.00E+00	22	7.27E-05	380	1.26E-03	4.5 U	0.00E+00	1100	6.22E-03
10/14/2011		4222	4222	220	980	4.46E-03	3.9 U	0.00E+00	57	1.92E-04	3.9 U	0.00E+00	19	6.28E-05	310	1.03E-03	3.9 U	0.00E+00	760	4.30E-03
11/21/2011		5015	5015	200	690	2.85E-03	3.2 U	0.00E+00	55	1.69E-04	3.2 U	0.00E+00	45	1.35E-04	290	8.72E-04	3.2 U	0.00E+00	380	1.95E-03
11/21/2011		5015	5015	200	700	2.90E-03	3.1 U	0.00E+00	57	1.75E-04	3.1 U	0.00E+00	59	1.77E-04	300	9.02E-04	3.1 U	0.00E+00	390	2.01E-03
12/14/2011		5339	5339	200	890	3.68E-03	3.2 U	0.00E+00	62	1.90E-04	3.2 U	0.00E+00	64	1.92E-04	270	8.12E-04	3.2 U	0.00E+00	350	1.80E-03
1/19/2012		5958	5958	0	540	0.00E+00	2.8 U	0.00E+00	17	0.00E+00	2.8 U	0.00E+00	9.9	0.00E+00	69	0.00E+00	2.8 U	0.00E+00	78	0.00E+00
2/15/2012		6364	6364	0	990	0.00E+00	4.1 U	0.00E+00	24	0.00E+00	4.1 U	0.00E+00	100	0.00E+00	230	0.00E+00	4.1 U	0.00E+00	150	0.00E+00
3/15/2012		6942	6942	0	1100	0.00E+00	3.8 U	0.00E+00	43	0.00E+00	3.8 U	0.00E+00	20	0.00E+00	220	0.00E+00	3.8 U	0.00E+00	140	0.00E+00
4/19/2012		7625	7625	80	650	1.08E-03	2.4 U	0.00E+00	28	3.44E-05	2.4 U	0.00E+00	8.1	9.74E-06	130	1.56E-04	2.4 U	0.00E+00	100	2.06E-04
5/16/2012		8138	8138	200	650	2.69E-03	2.0 U	0.00E+00	28	8.59E-05	2.0 U	0.00E+00	8.9	2.68E-05	110	3.31E-04	2.0 U	0.00E+00	130	6.68E-04
Pulse-off period June 1, 2012 to August 14, 2012																				
8/14/2012		8541	8541	360	710	3.23E-03	2.5 U	0.00E+00	44	1.49E-04	2.5 U	0.00E+00	11	3.64E-05	110	3.64E-04	2.5 U	0.00E+00	540	3.05E-03
9/17/2012		9029	9029	360	2000	8.27E-03	8.0 U	0.00E+00	29	8.90E-05	8.0 U	0.00E+00	19	5.71E-05	42	1.26E-04	8.0 U	0.00E+00	190	9.77E-04
Pulse-off period September 17, 2012 to November 15, 2012																				
11/15/2012		9033	9033	220	1200	5.46E-03	4.4 U	0.00E+00	19	6.41E-05	4.4 U	0.00E+00	33	1.09E-04	8	2.65E-05	4.4 U	0.00E+00	55	3.11E-04
12/14/2012		9436	9436	200	1200	4.96E-03	4.8 U	0.00E+00	35	1.07E-04	4.8 U	0.00E+00	16	4.81E-05	37	1.11E-04	4.8 U	0.00E+00	61	3.14E-04
Pulse-off period December 14, 2012 to February 26, 2013																				
2/26/2013		9511	9511	440	70	6.37E-04	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00
4/11/2013		9952	9952	420	1600	1.39E-02	8	6.95E-05	160	1.03E-03	5.1 U	0.00E+00	20	1.26E-04	88	5.56E-04	5.1 U	0.00E+00	320	3.46E-03
Pulse-off period April 11, 2013 to May 10, 2013																				
5/10/2013		9958	9958	420																

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene		Toluene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
3/11/2011	Dup	218	218	360	1400	1.03E-02	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	100 U	0.00E+00	350	1.80E-03		
3/18/2011		362	362	360	1100	8.07E-03	52 U	0.00E+00	52 U	0.00E+00	52 U	0.00E+00	210 U	0.00E+00	52 U	0.00E+00	120 JB	6.17E-04		
3/25/2011		459	459	360	760	5.57E-03	30 U	0.00E+00	33	1.56E-04	30 U	0.00E+00	30 U	0.00E+00	120 U	0.00E+00	30 U	0.00E+00	73	3.75E-04
3/30/2011		553	553	360	420	3.08E-03	13 U	0.00E+00	13 U	0.00E+00	13 U	0.00E+00	51 U	0.00E+00	13 U	0.00E+00	37	1.90E-04		
4/8/2011		759	759	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	57	2.93E-04		
4/15/2011		920	920	360	560	4.11E-03	20 U	0.00E+00	20 U	0.00E+00	20 U	0.00E+00	81 U	0.00E+00	20 U	0.00E+00	85	4.37E-04		
5/19/2011		1681	1681	330	360	2.42E-03	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	47 U	0.00E+00	12 U	0.00E+00	120	5.66E-04		
6/16/2011		2187	2187	300	180	1.10E-03	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	12	4.36E-05	7.8 U	0.00E+00		
7/15/2011		2745	2745	220	280	1.25E-03	7.6 U	0.00E+00	20	5.79E-05	7.6 U	0.00E+00	7.6 U	0.00E+00	30 U	0.00E+00	7.6 U	0.00E+00	49	1.54E-04
8/22/2011		3129	3129	260	160	8.47E-04	5.0 U	0.00E+00	5.0 U	0.00E+00	5.0 U	0.00E+00	20 U	0.00E+00	7.6	2.39E-05	5.0 U	0.00E+00		
9/15/2011		3626	3626	220	83	3.72E-04	4.5 U	0.00E+00	4.5 U	0.00E+00	4.5 U	0.00E+00	18 U	0.00E+00	5	1.33E-05	4.5 U	0.00E+00		
10/14/2011		4222	4222	220	50	2.24E-04	3.9 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00	16 U	0.00E+00	3.9 U	0.00E+00	3.9 U	0.00E+00		
11/21/2011		5015	5015	200	27	1.10E-04	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00		
11/21/2011		5015	5015	200	28	1.14E-04	3.1 U	0.00E+00	31 U	0.00E+00	3.1 U	0.00E+00	12 U	0.00E+00	3.1 U	0.00E+00	3.1 U	0.00E+00		
12/14/2011		5339	5339	200	24	9.78E-05	3.2 U	0.00E+00	32 U	0.00E+00	3.2 U	0.00E+00	13 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00		
1/19/2012		5958	5958	0	10	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00		
2/15/2012		6364	6364	0	19	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00		
3/15/2012		6942	6942	0	25	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00		
4/19/2012		7625	7625	80	19	3.10E-05	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00
5/16/2012		8138	8138	200	24	9.78E-05	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00
Pulse -off period June 1, 2012 to August 14, 2012																				
8/14/2012	Dup	8541	8541	360	64	2.87E-04	2.5 U	0.00E+00	25 U	0.00E+00	2.5 U	0.00E+00	9.9 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00		
9/17/2012		9029	9029	360	71	2.89E-04	8.0 U	0.00E+00	80 U	0.00E+00	8.0 U	0.00E+00	32 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00		
Pulse -off period September 17, 2012 to November 15, 2012																				
11/15/2012	Dup	9033	9033	220	39	1.75E-04	4.4 U	0.00E+00	44 U	0.00E+00	4.4 U	0.00E+00	18 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00		
12/14/2012		9436	9436	200	60	2.44E-04	4.8 U	0.00E+00	48 U	0.00E+00	4.8 U	0.00E+00	19 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00		
Pulse -off period December 14, 2012 to February 26, 2013																				
2/26/2013	Dup	9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	6.8 U	0.00E+00	27 U	0.00E+00	12	6.39E-05	6.8 U	0.00E+00		
4/11/2013		9952	9952	420	110	9.41E-04	5.1 U	0.00E+00	51 U	0.00E+00	5.1 U	0.00E+00	20 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00		
Pulse -off period April 11, 2013 to May 10, 2013																				
5/10/2013	Dup	9958	9958	420	79	6.76E-04	5.4 U	0.00E+00	54 U	0.00E+00	5.4 U	0.00E+00	22 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00		
7/15/2013		10984	10984	360	100	7.33E-04	4.7 U	0.00E+00	47 U	0.00E+00</td										

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
3/11/2011	Dup	218	218	360	100 U	0.00E+00	100 U	0.00E+00	100 U	0.00E+00	420 U	0.00E+00	420 U	0.00E+00	3.47E-01	75.54
3/18/2011		362	362	360	52 U	0.00E+00	59	3.50E-04	110	6.52E-04	210 U	0.00E+00	210 U	0.00E+00	2.03E-01	104.77
3/25/2011		459	459	360	30 U	0.00E+00	30 U	0.00E+00	47	2.79E-04	130	4.21E-04	120 U	0.00E+00	1.42E-01	118.53
3/30/2011		553	553	360	16	9.48E-05	23	1.36E-04	46	2.73E-04	99	3.21E-04	51 U	0.00E+00	8.47E-02	126.48
4/8/2011		759	759	360	38	2.25E-04	84	4.98E-04	120	7.11E-04	81 U	0.00E+00	81 U	0.00E+00	1.01E-01	147.32
4/15/2011		920	920	360	45	2.67E-04	160	9.48E-04	140	8.30E-04	180 J,B	5.83E-04	81 U	0.00E+00	9.17E-02	162.08
5/19/2011		1681	1681	330	12 U	0.00E+00	12 U	0.00E+00	12 U	0.00E+00	360	1.07E-03	47 U	0.00E+00	9.44E-02	233.92
6/16/2011		2187	2187	300	15	7.41E-05	54	2.67E-04	64	3.16E-04	69 J,B	1.86E-04	31 U	0.00E+00	3.49E-02	251.58
7/15/2011		2745	2745	220	13	4.71E-05	120	4.35E-04	140	5.07E-04	94	1.86E-04	30 U	0.00E+00	3.23E-02	269.61
8/22/2011		3129	3129	260	5.9	2.52E-05	19	8.13E-05	29	1.24E-04	62 J,B	1.45E-04	20 U	0.00E+00	2.71E-02	280.03
9/15/2011		3626	3626	220	4.5 U	0.00E+00	14	5.07E-05	17	6.16E-05	49	9.71E-05	18 U	0.00E+00	1.47E-02	287.36
10/14/2011		4222	4222	220	3.9 U	0.00E+00	7.1	2.57E-05	10	3.62E-05	16 U	0.00E+00	16 U	0.00E+00	1.03E-02	293.51
11/21/2011		5015	5015	200	3.2 U	0.00E+00	4.5	1.48E-05	6.1	2.01E-05	36	6.48E-05	13 U	0.00E+00	6.19E-03	298.43
11/21/2011		5015	5015	200	3.1 U	0.00E+00	4.2	1.38E-05	6.2	2.04E-05	31 U	0.00E+00	12 U	0.00E+00	6.30E-03	298.51
12/14/2011		5339	5339	200	3.2 U	0.00E+00	3.2 U	0.00E+00	3.2 U	0.00E+00	32 UJ	0.00E+00	13 U	0.00E+00	6.77E-03	300.62
1/19/2012		5958	5958	0	2.8 U	0.00E+00	2.8 U	0.00E+00	2.8 U	0.00E+00	11 U	0.00E+00	11 U	0.00E+00	0.00E+00	300.62
2/15/2012		6364	6364	0	4.1 U	0.00E+00	4.1 U	0.00E+00	4.1 U	0.00E+00	16 U	0.00E+00	16 U	0.00E+00	0.00E+00	300.62
3/15/2012		6942	6942	0	3.8 U	0.00E+00	3.8 U	0.00E+00	3.8 U	0.00E+00	15 U	0.00E+00	15 U	0.00E+00	0.00E+00	300.62
4/19/2012		7625	7625	80	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.4 U	0.00E+00	9.4 U	0.00E+00	1.51E-03	301.65
5/16/2012		8138	8138	200	2.0 U	0.00E+00	2.0 U	0.00E+00	2.0 U	0.00E+00	7.9 U	0.00E+00	7.9 U	0.00E+00	3.90E-03	303.65
Pulse -off period June 1, 2012 to August 14, 2012																
8/14/2012		8541	8541	360	2.5 U	0.00E+00	2.5 U	0.00E+00	2.5 U	0.00E+00	25 U	0.00E+00	9.9 U	0.00E+00	7.12E-03	306.52
9/17/2012		9029	9029	360	8.0 U	0.00E+00	8.0 U	0.00E+00	8.0 U	0.00E+00	80 U	0.00E+00	32 U	0.00E+00	9.81E-03	311.31
Pulse -off period September 17, 2012 to November 15, 2012																
11/15/2012		9033	9033	220	4.4 U	0.00E+00	4.4 U	0.00E+00	4.4 U	0.00E+00	44 U	0.00E+00	18 U	0.00E+00	6.15E-03	311.34
12/14/2012		9436	9436	200	4.8 U	0.00E+00	4.8 U	0.00E+00	4.8 U	0.00E+00	48 U	0.00E+00	19 U	0.00E+00	5.79E-03	313.67
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013		9511	9511	440	6.8 U	0.00E+00	6.8 U	0.00E+00	6.8 U	0.00E+00	68 U	0.00E+00	27 U	0.00E+00	7.01E-04	313.72
4/11/2013		9952	9952	420	5.1 U	0.00E+00	5.1 U	0.00E+00	5.1 U	0.00E+00	51 U	0.00E+00	20 U	0.00E+00	2.01E-02	322.58
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013		9958	9958	420	5.4 U	0.00E+00	5.4 U	0.00E+00	5.4 U	0.00E+00	54 U	0.00E+00	22 U	0.00E+00	1.44E-02	322.66
7/15/2013		10984	10984	360	4.7 U	0.00E+00	4.7 U	0.00E+00	4.7 U	0.00E+00	47 U	0.00E+00	19 U	0.00E+00	1.65E-02	339.59
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013		10991	10991	380	4 U	0.00E+00	4 U	0.00E+00	4 U	0.00E+00	40 U	0.00E+00	40 U	0.00E+00	8.81E-03	339.65
11/18/2013		12069	12069	380	7.6 U	0.00E+00	7.6 U	0.00E+00	7.6 U	0.00E+00	76 U	0.00E+00	31 U	0.00E+00	1.58E-02	356.69

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																				
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,2-Dichloroethane		1,1-Dichloroethene		cis-1,2-Dichloroethene		trans-1,2-Dichloroethene		Tetrachloroethene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																				
1/15/2014		12074	12074	380	950	7.47E-03	3.5 U	0.00E+00	24	1.40E-04	3.5 U	0.00E+00	10	5.71E-05	23	1.31E-04	3.5 U	0.00E+00	82	8.01E-04
3/14/2014		13057	13057	380	1400	1.10E-02	7.8 U	0.00E+00	32	1.87E-04	7.8 U	0.00E+00	24	1.37E-04	88	5.03E-04	7.8 U	0.00E+00	30	2.93E-04
Pulse -off period March 14, 2014 to May 15, 2014																				
5/15/2014		13063	13063	300	1000	6.20E-03	3.0 U	0.00E+00	20	9.21E-05	3.0 U	0.00E+00	14	6.31E-05	65	2.93E-04	3.0 U	0.00E+00	71	5.48E-04
7/23/2014		14714	14714	100	670	1.39E-03	2.2 U	0.00E+00	19	2.92E-05	2.2 U	0.00E+00	9.6	1.44E-05	12	1.80E-05	2.2 U	0.00E+00	47	1.21E-04
Pulse -off period July 23, 2014 to September 16, 2014																				
9/16/2014		14721	14715	120	470	1.17E-03	2.3 U	0.00E+00	10	1.84E-05	2.3 U	0.00E+00	4.8	8.66E-06	6.9	1.24E-05	2.3 U	0.00E+00	79	2.44E-04
11/14/2014		16095	16095	290	660	3.96E-03	2.4 U	0.00E+00	15	6.67E-05	2.4 U	0.00E+00	8.5	3.70E-05	19	8.28E-05	2.4 U	0.00E+00	32	2.39E-04
Pulse -off period November 14, 2014 to January 9, 2015																				
1/9/2015		16102	16102	180	360	1.34E-03	1.1 U	0.00E+00	4.6	1.27E-05	1.1 U	0.00E+00	4.0	1.08E-05	7.2	1.95E-05	1.1 U	0.00E+00	12	5.55E-05
3/13/2015		17322	17322	260	660	3.55E-03	2.4 U	0.00E+00	22	8.78E-05	2.4 U	0.00E+00	8.0	3.13E-05	16	6.25E-05	2.4 U	0.00E+00	29	1.94E-04
Pulse -off period March 13, 2015 to May 15, 2015																				
5/15/2015		17329	17329	260	360	1.94E-03	1.1 U	0.00E+00	7.3	2.91E-05	1.1 U	0.00E+00	2.5	9.77E-06	5.9	2.31E-05	1.1 U	0.00E+00	31	2.07E-04
7/16/2015		18578	18578	180	260	9.68E-04	1.2 U	0.00E+00	22	6.08E-05	1.2 U	0.00E+00	3.5	9.47E-06	12	3.25E-05	1.2 U	0.00E+00	54	2.50E-04
Pulse -off period July 16, 2015 to September 22, 2015																				
9/22/2015		18580	18580	160	150	4.96E-04	1.2 U	0.00E+00	4.2	1.03E-05	1.2 U	0.00E+00	1.2	2.89E-06	2.4	5.77E-06	1.2 U	0.00E+00	47	1.93E-04
11/20/2015		19973	19973	230	320	1.52E-03	1.2 U	0.00E+00	26	9.17E-05	1.2 U	0.00E+00	5.5	1.90E-05	13	4.49E-05	1.2 U	0.00E+00	50	2.96E-04
Pulse -off period November 20, 2015 to January 19, 2016																				
1/19/2016		19982	19982	180	78	2.90E-04	1.1 U	0.00E+00	1.9	5.25E-06	1.1 U	0.00E+00	1.1 U	0.00E+00	1.3	3.52E-06	1.1 U	0.00E+00	10	4.63E-05
3/18/2016		21229	21229	260	340	1.83E-03	1.1 U	0.00E+00	21	8.38E-05	1.1 U	0.00E+00	5.4	2.11E-05	11	4.30E-05	1.1 U	0.00E+00	30	2.01E-04
Pulse -off period March 18, 2016 to May 19, 2016																				
5/19/2016		21233	21233	140	100	2.90E-04	1.2 U	0.00E+00	2.9	6.23E-06	1.2 U	0.00E+00	1.4	2.95E-06	2.2	4.63E-06	1.2 U	0.00E+00	9.3	3.35E-05
7/22/2016		22751	22751	180	340	1.27E-03	1.0 U	0.00E+00	13	3.59E-05	1.0 U	0.00E+00	5.2	1.41E-05	8.5	2.30E-05	1.0 U	0.00E+00	40	1.85E-04
Pulse -off period July 22, 2016 to September 20, 2016																				
9/20/2016		22752	22752	180	160	5.96E-04	1.2 U	0.00E+00	3.4	9.39E-06	1.2 U	0.00E+00	1.8	4.87E-06	2.6	7.03E-06	1.2 U	0.00E+00	41	1.90E-04
11/28/2016		24305	24305	220	330	1.50E-03	1.2 U	0.00E+00	10	3.38E-05	1.2 U	0.00E+00	5.1	1.69E-05	8.3	2.74E-05	1.2 U	0.00E+00	13	7.35E-05
Pulse -off period November 20, 2016 to January 24, 2017																				
1/24/2017		24309	24309	190	52	2.04E-04	1.2 U	0.00E+00	1.4	4.08E-06	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	440	8.19E-04	2.4 U	0.00E+00	8.6	1.19E-05	2.4 U	0.00E+00	3.7	5.00E-06	9	1.22E-05	2.4 U</td			

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT																		
Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Trichloroethene		Vinyl chloride		Methylene Chloride		Carbon Tetrachloride		Chloroform		Chloroethane		Benzene	
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)
Pulse -off period November 18, 2013 to January 15, 2014																		
1/15/2014		12074	12074	380	37	2.86E-04	3.5 U	0.00E+00	35 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	14 U	0.00E+00	3.5 U	0.00E+00
3/14/2014		13057	13057	380	41	3.17E-04	7.8 U	0.00E+00	78 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	31 U	0.00E+00	7.8 U	0.00E+00
Pulse -off period March 14, 2014 to May 15, 2014																		
5/15/2014		13063	13063	300	33	2.02E-04	3.0 U	0.00E+00	30 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	12 U	0.00E+00	3.0 U	0.00E+00
7/23/2014		14714	14714	100	14	2.85E-05	2.2 U	0.00E+00	22 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	9.0 U	0.00E+00	2.2 U	0.00E+00
Pulse -off period July 23, 2014 to September 16, 2014																		
9/16/2014		14721	14715	120	22	5.38E-05	2.3 U	0.00E+00	23 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	9.4 U	0.00E+00	6.4	9.30E-06
11/14/2014		16095	16095	290	11	6.50E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.7 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period November 14, 2014 to January 9, 2015																		
1/9/2015		16102	16102	180	4.9	1.80E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.6 U	0.00E+00	1.1 U	0.00E+00
3/13/2015		17322	17322	260	12	6.36E-05	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period March 13, 2015 to May 15, 2015																		
5/15/2015		17329	17329	260	8.2	4.34E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.5 U	0.00E+00	1.1 U	0.00E+00
7/16/2015		18578	18578	180	14	5.13E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period July 16, 2015 to September 22, 2015																		
9/22/2015		18580	18580	160	11	3.59E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
11/20/2015		19973	19973	230	11	5.15E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 20, 2015 to January 19, 2016																		
1/19/2016		19982	19982	180	2	7.33E-06	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
3/18/2016		21229	21229	260	8.5	4.50E-05	1.1 U	0.00E+00	11 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	4.3 U	0.00E+00	1.1 U	0.00E+00
Pulse -off period March 18, 2016 to May 19, 2016																		
5/19/2016		21233	21233	140	2.1	5.99E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
7/22/2016		22751	22751	180	9.3	3.41E-05	1.0 U	0.00E+00	10 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	4.1 U	0.00E+00	1.0 U	0.00E+00
Pulse -off period July 22, 2016 to September 20, 2016																		
9/20/2016		22752	22752	180	10	3.67E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
11/28/2016		24305	24305	220	4.7	2.11E-05	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.7 U	0.00E+00	1.2 U	0.00E+00
Pulse -off period November 28, 2016 to January 24, 2017																		
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.9 U	0.00E+00	1.2 U	0.00E+00
3/23/2017		25572	25572	90	4.6	8.43E-06	2.4 U	0.00E+00	24 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	9.5 U	0.00E+00	2.4 U	0.00E+00
Pulse -off period March 23, 2017 to May 15, 2017																		
5/15/2017		25597	25597	90	2.7	4.95E-06	1.2 U	0.00E+00	12 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	4.6 U	0.00E+00	1.2 U	0.00E+00
7/20/2017		27137	27137															

Table 4.5
Cell 5 - Phase 2 SVE System Effluent Data
March 2011 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

CELL 5 SVE EFFLUENT

Date	Sample Type	SVE Run Time (hr)	Cell 5 Run Time (hr)	SVE Flow Rate (scfm)	Ethylbenzene		m&p-Xylenes		o-Xylenes		Acetone		Methyl Ethyl Ketone (MEK)		Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)
					Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)	Conc (ppbv)	Mass Removal Rate (lb/hr)		
Pulse -off period	November 18, 2013 to January 15, 2014															
1/15/2014		12074	12074	380	3.5 U	0.00E+00	3.5 U	0.00E+00	3.5 U	0.00E+00	35 U	0.00E+00	14 U	0.00E+00	8.8E-03	356.73
3/14/2014		13057	13057	380	7.8 U	0.00E+00	7.8 U	0.00E+00	7.8 U	0.00E+00	78 U	0.00E+00	31 U	0.00E+00	1.24E-02	368.96
Pulse -off period	March 14, 2014 to May 15, 2014															
5/15/2014		13063	13063	300	3.0 U	0.00E+00	3.0 U	0.00E+00	3.0 U	0.00E+00	30 U	0.00E+00	12 U	0.00E+00	7.4E-03	369.01
7/23/2014		14714	14714	100	2.2 U	0.00E+00	2.2 U	0.00E+00	2.2 U	0.00E+00	22 U	0.00E+00	9.0 U	0.00E+00	1.6E-03	371.61
Pulse -off period	July 23, 2014 to September 16, 2014															
9/16/2014		14721	14715	120	2.3 U	0.00E+00	2.3 U	0.00E+00	2.3 U	0.00E+00	32	3.46E-05	9.4 U	0.00E+00	1.55E-03	371.61
11/14/2014		16095	16095	290	2.4 U	0.00E+00	2.4 U	0.00E+00	2.8	1.34E-05	24 U	0.00E+00	9.7 U	0.00E+00	4.46E-03	377.77
Pulse -off period	November 14, 2014 to January 9, 2015															
1/9/2015		16102	16102	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.6 U	0.00E+00	1.46E-03	377.78
3/13/2015		17322	17322	260	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	3.99E-03	382.64
Pulse -off period	March 13, 2015 to May 15, 2015															
5/15/2015		17329	17329	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.5 U	0.00E+00	2.25E-03	382.66
7/16/2015		18578	18578	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.37E-03	384.37
Pulse -off period	July 16, 2015 to September 22, 2015															
9/22/2015		18580	18580	160	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	7.45E-04	384.37
11/20/2015		19973	19973	230	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	2.03E-03	387.19
Pulse -off period	November 20, 2015 to January 19, 2016															
1/19/2016		19982	19982	180	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	3.53E-04	387.20
3/18/2016		21229	21229	260	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.3 U	0.00E+00	2.22E-03	389.97
Pulse -off period	March 18, 2016 to May 19, 2016															
5/19/2016		21233	21233	140	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	3.43E-04	389.97
7/22/2016		22751	22751	180	1.0 U	0.00E+00	1.0 U	0.00E+00	1.0 U	0.00E+00	10 U	0.00E+00	4.0 J	0.00E+00	1.56E-03	392.33
Pulse -off period	July 22, 2016 to September 20, 2016															
9/20/2016		22752	22752	180	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	8.43E-04	392.33
11/28/2016		24305	24305	220	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.7 U	0.00E+00	1.67E-03	394.93
Pulse -off period	November 28, 2016 to January 24, 2017															
1/24/2017		24309	24309	190	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.9 U	0.00E+00	2.08E-04	394.94
3/23/2017		25572	25572	90	2.4 U	0.00E+00	2.4 U	0.00E+00	2.4 U	0.00E+00	24 U	0.00E+00	9.5 U	0.00E+00	8.77E-04	396.04
Pulse -off period	March 23, 2017 to May 15, 2017															
5/15/2017		25597	25597	90	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	3.80E-04	396.05
7/20/2017		27137	27137	350	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.8 U	0.00E+00	2.07E-03	399.24
Pulse -off period	July 20, 2017 to September 14, 2017															
9/14/2017		27146	27146	350	1.1 U	0.00E+00	1.1	6.34E-06	1.1 U	0.00E+00	12	3.78E-05	4.3 U	0.00E+00	2.28E-03	402.77
11/17/2017		28631	28631	480	1.1 U	0.00E+00	1.1 U	0.00E+00	1.1 U	0.00E+00	11 U	0.00E+00	4.4 U	0.00E+00	2.78E-03	406.93
Pulse -off period	November 17, 2017 to January 22, 2018															
1/22/2018		28634	28634	440	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	29	1.15E-04	4.7 U	0.00E+00	1.69E-03	406.93
3/23/2018		29870	29870	460	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	4.6 U	0.00E+00	1.85E-03	409.22
Pulse -off period	March 23, 2018 to May 21, 2018															
5/21/2018		29875	29875	420	1.2 U	0.00E+00	1.2 U	0.00E+00	1.2 U	0.00E+00	12 U	0.00E+00	5.0 U	0.00E+00	1.18E-03	409.22

Notes:

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine).

of Medicine

SCFM standard cubic feet per min

J Indicates estimated value.

B The analyte was dete

B blank.

When a duplicate sample was collected

are used in the mass calculations.

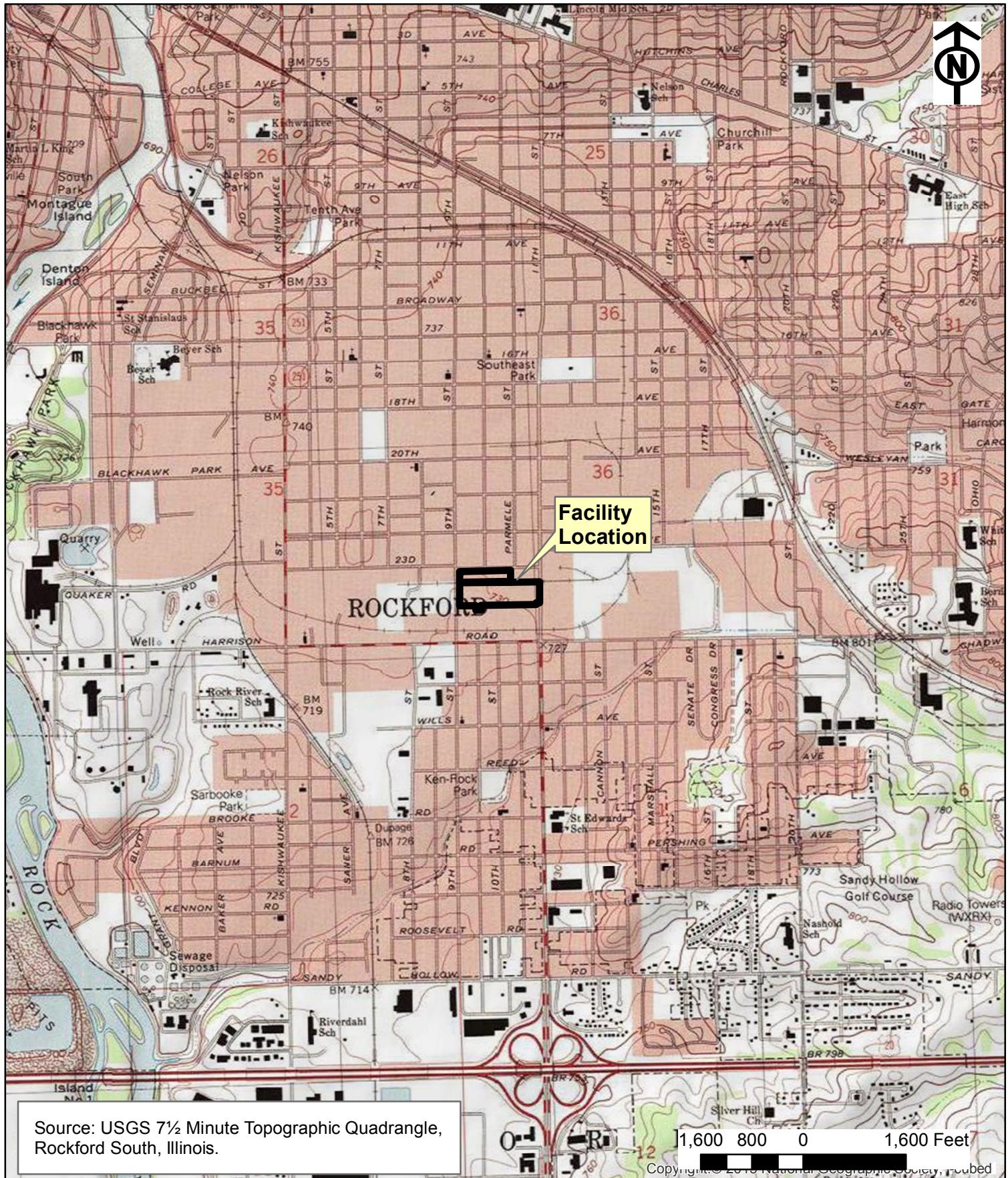
Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
SYSTEM STARTUP																0.00
12/3/2009	0															11.91
12/10/2009	53	0.22	11.91													26.97
12/11/2009				59	0.25	15.05										45.48
12/14/2009							60	0.31	18.51							46.91
12/15/2009					68	0.16	16.48									49.55
12/16/2009							76	0.17	21.16							52.86
12/22/2009	124	0.05	15.23													66.15
12/29/2009				180	0.12	29.76										86.77
1/5/2010							236	0.13	41.78							92.75
1/13/2010				301	0.05	35.75										99.35
1/21/2010							361	0.05	48.37							106.27
1/27/2010				408	0.06	42.68										130.26
2/24/2010	631	0.01	20.06	631	0.04	51.44	631	0.04	58.76							155.02
3/15/2010	782	0.01	22.02	782	0.09	64.40	782	0.07	68.60							180.92
4/14/2010	935	0.02	25.22	935	0.04	70.89	935	0.11	84.81							198.69
5/13/2010	1165	0.01	27.75	1165	0.04	79.74	1165	0.03	91.21							214.02
6/21/2010	1477	0.01	30.20	1477	0.02	86.90	1477	0.02	96.92							224.81
7/21/2010	1686	0.01	32.52	1686	0.02	91.24	1686	0.02	101.05							237.25
8/23/2010	1928	0.00	32.52	1928	0.00	91.24	1928	0.00	101.05							243.98
9/23/2010	2174	0.01	34.49	2174	0.02	96.27	2174	0.02	106.49							250.42
10/22/2010	2406	0.01	35.86	2406	0.01	98.85	2406	0.01	109.27							261.65
11/15/2010	2598	0.01	36.96	2598	0.01	101.41	2598	0.01	112.05							267.06
12/22/2010	2777	0.01	38.22	2955	0.02	107.99	2777	0.02	115.44							272.76
1/24/2011	2975	0.01	39.47	3352	0.01	110.39	2975	0.01	117.20							329.87
2/25/2011	3167	0.01	40.53	3737	0.01	114.08	3167	0.00	118.15							360.02
3/11/2011										222	1.72	381.87	218	0.35	75.54	730.17
3/18/2011	3293	0.01	41.27	3988	0.00	114.57	3293	0.00	118.34	366	0.51	453.50	362	0.20	104.77	832.46
3/25/2011										463	0.29	482.07	459	0.14	118.53	874.78
3/30/2011										558	0.32	512.25	553	0.08	126.48	912.92
4/8/2011										764	0.29	572.27	759	0.10	147.32	993.77
4/15/2011	3460	0.01	42.15	4322	0.00	115.07	3460	0.00	118.47	924	0.24	610.05	920	0.09	162.08	1047.81
5/19/2011	3665	0.00	42.87	4732	0.00	115.31	3665	0.00	118.53	1685	0.16	730.28	1681	0.09	233.92	1240.92
6/16/2011	3830	0.00	43.39	5062	0.00	115.55	3830	0.00	118.81	2191	0.11	753.86	2187	0.03	251.58	1283.20
7/15/2011	4472	0.00	44.96	4472	0.00	115.18	4472	0.00	119.39	2750	0.08	830.85	2745	0.03	269.61	1380.36
8/22/2011	4775	0.00	45.59	4775	0.00	115.40	4775	0.01	121.30	3133	0.10	868.97	3129	0.03	280.03	1431.44
9/15/2011	4968	0.00	45.93	4968	0.00	115.51	4968	0.00	121.91	3630	0.08	906.88	3626	0.01	287.36	1477.64
10/14/2011	5199	0.00	46.20	5199	0.00	115.57	5199	0.00	122.54	4226	0.05	935.35	4222	0.01	293.51	1513.18
11/21/2011	5503	0.00	46.43	5503	0.00	115.62	5503	0.00	123.00	5019	0.04	966.50	5015	0.01	298.43	1549.98
12/14/2011	5670	0.00	46.53	5670	0.00	115.65	5670	0.00	123.67	5343	0.03	975.34	5339	0.01	300.62	1561.80
1/19/2012	5974	0.00	46.69	5974	0.00	115.71	5974	0.00	124.59	5993	0.00	975.34	5958	0.00	300.62	1562.94
2/15/2012	6189	0.00	46.80	6189	0.00	115.74	6189	0.01	126.03	6368	0.03	986.48	6364	0.00	300.62	1575.67
3/15/2012	6421	0.00	46.89	6421	0.00	115.79	6421	0.01	127.43	6946	0.03	1005.89	6942	0.00	300.62	1596.62
4/19/2012	6701	0.00	47.04	6701	0.00	115.84	6701	0.00	128.02	7629	0.05	1038.74	7625	0.00	301.65	1631.30
5/16/2012	6916	0.00	47.18	6916	0.00	115.88	6916	0.00	128.27	8143	0.04	1060.30	8138	0.00	303.65	1655.28
Pulse-off period June 1, 2012 to August 14, 2012																
8/14/2012	7094	0.00	47.54	7094	0.00	116.20	7094	0.00	129.03	8546	0.05	1081.05	8541	0.01	306.52	1680.34
9/17/2012	7317	0.00	47.99	7317	0.00	116.40	7317	0.02	133.04	9033	0.04	1102.58	9029	0.01	311.3	

Table 4.6
Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
December 2009 - June 2018
Hamilton Sundstrand Corporation
Plants 1/2 Facility
Rockford, Illinois

Date	Cell 1			Cell 2			Cell 3			Cell 4			Cell 5			Total Cumulative Mass Removal (lb)
	Total Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	Run Time (hr)	Mass Removal Rate (lb/hr)	Cumulative Mass Removal (lb)	
Pulse -off period December 14, 2012 to February 26, 2013																
2/26/2013	7518	0.00	48.19	7518	0.00	116.86	7519	0.00	133.94	9439	0.00	1103.57	9511	0.00	313.72	1716.32
4/11/2013	7723	0.00	48.32	7723	0.00	116.97	8134	0.00	134.40	9876	0.00	1105.48	9952	0.02	322.58	1727.74
Pulse -off period April 11, 2013 to May 10, 2013																
5/10/2013	7724	0.00	48.32	7724	0.00	116.97	8135	0.00	134.40	9882	0.00	1105.50	9958	0.01	322.66	1727.85
7/15/2013	8039	0.00	48.86	8039	0.00	117.21	9082	0.00	134.70	10907	0.00	1108.40	10984	0.02	339.59	1748.76
Pulse -off period July 15, 2013 to September 9, 2013																
9/9/2013	8040	0.00	48.86	8040	0.00	117.21	9083	0.00	134.70	10914	0.00	1108.44	10991	0.01	339.65	1748.86
11/18/2013	8372	0.00	49.15	8372	0.00	117.30	10081	0.00	136.08	11992	0.00	1110.90	12069	0.02	356.69	1770.12
Pulse -off period November 18, 2013 to January 15, 2014																
1/15/2014	8651	0.00	49.36	8651	0.00	117.51	10916	0.00	136.88	11997	0.00	1110.91	12074	0.01	356.73	1771.39
3/14/2014	8894	0.00	49.48	8894	0.00	117.52	11645	0.00	137.13	12980	0.00	1112.65	13057	0.01	368.96	1785.75
Pulse -off period March 14, 2014 to May 15, 2014																
5/15/2014	8990	0.00	49.54	8990	0.00	117.64	11934	0.00	137.98	12986	0.00	1112.67	13063	0.01	369.01	1786.83
7/23/2014	9321	0.00	50.01	9321	0.00	117.79	12926	0.00	138.52	14627	0.00	1113.02	14714	0.00	371.61	1790.95
Pulse -off period July 23, 2014 to September 16, 2014																
9/16/2014	9494	0.00	50.32	9494	0.00	118.05	13445	0.00	139.28	14628	0.00	1113.03	14715	0.00	371.61	1792.29
11/14/2014	9777	0.00	50.45	9777	0.00	118.12	14294	0.00	139.95	16008	0.00	1116.04	16095	0.00	377.77	1802.33
Pulse -off period November 14, 2014 to January 9, 2015																
1/9/2015	9778	0.00	50.45	9778	0.00	118.12	14299	0.00	139.96	16015	0.00	1116.05	16102	0.00	377.78	1802.36
3/13/2015	10045	0.00	50.56	10045	0.00	118.15	15099	0.00	140.58	17178	0.00	1117.32	17322	0.00	382.64	1809.25
Pulse -off period March 13, 2015 to May 15, 2015																
5/15/2015	10046	0.00	50.56	10046	0.00	118.15	15102	0.00	140.58	17186	0.00	1117.34	17329	0.00	382.66	1809.28
7/16/2015	10343	0.00	50.92	10343	0.00	118.25	15992	0.00	141.23	18436	0.00	1121.16	18578	0.00	384.37	1815.93
Pulse -off period July 16, 2015 to September 22, 2015																
9/22/2015	10343	0.00	50.92	10343	0.00	118.26	15994	0.00	141.24	18439	0.00	1121.16	18580	0.00	384.37	1815.95
11/20/2015	10626	0.00	51.03	10626	0.00	118.33	16842	0.00	141.50	19832	0.00	1126.63	19973	0.00	387.19	1824.68
Pulse -off period November 20, 2015 to January 19, 2016																
1/19/2016	10627	0.00	51.03	10627	0.00	118.33	16846	0.00	141.50	19841	0.00	1126.63	19982	0.00	387.20	1824.70
3/18/2016	10883	0.00	51.14	10883	0.00	118.36	17612	0.00	141.72	21088	0.00	1128.65	21229	0.00	389.97	1829.83
Pulse -off period March 18, 2016 to May 19, 2016																
5/19/2016	10884	0.00	51.14	10884	0.00	118.36	17615	0.00	141.72	21092	0.00	1128.65	21233	0.00	389.97	1829.84
7/22/2016	11190	0.00	51.54	11190	0.00	118.45	17921	0.00	141.87	22610	0.00	1129.38	22751	0.00	392.33	1833.57
Pulse -off period July 22, 2016 to September 20, 2016																
9/20/2016	11191	0.00	51.54	11191	0.00	118.45	17923	0.00	141.87	22611	0.00	1129.38	22752	0.00	392.33	1833.58
11/28/2016	11521	0.00	51.74	11521	0.00	118.53	18915	0.00	141.98	24162	0.00	1129.51	24305	0.00	394.93	1836.69
Pulse -off period November 28, 2016 to January 24, 2017																
1/24/2017	11522	0.00	51.74	11522	0.00	118.53	18917	0.00	141.98	24166	0.00	1129.51	24309	0.00	394.94	1836.69

Figures



AECOM

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Facility Location Map
Area 9/10 Remedial Action
Southeast Rockford Groundwater
Contamination Superfund Site
Rockford, IL

FIGURE NUMBER

1

DRAWN BY:	DATE:	PROJECT NUMBER:	FIGURE NUMBER
CC	8/2/2018	60562097.4213	1 of 1



AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

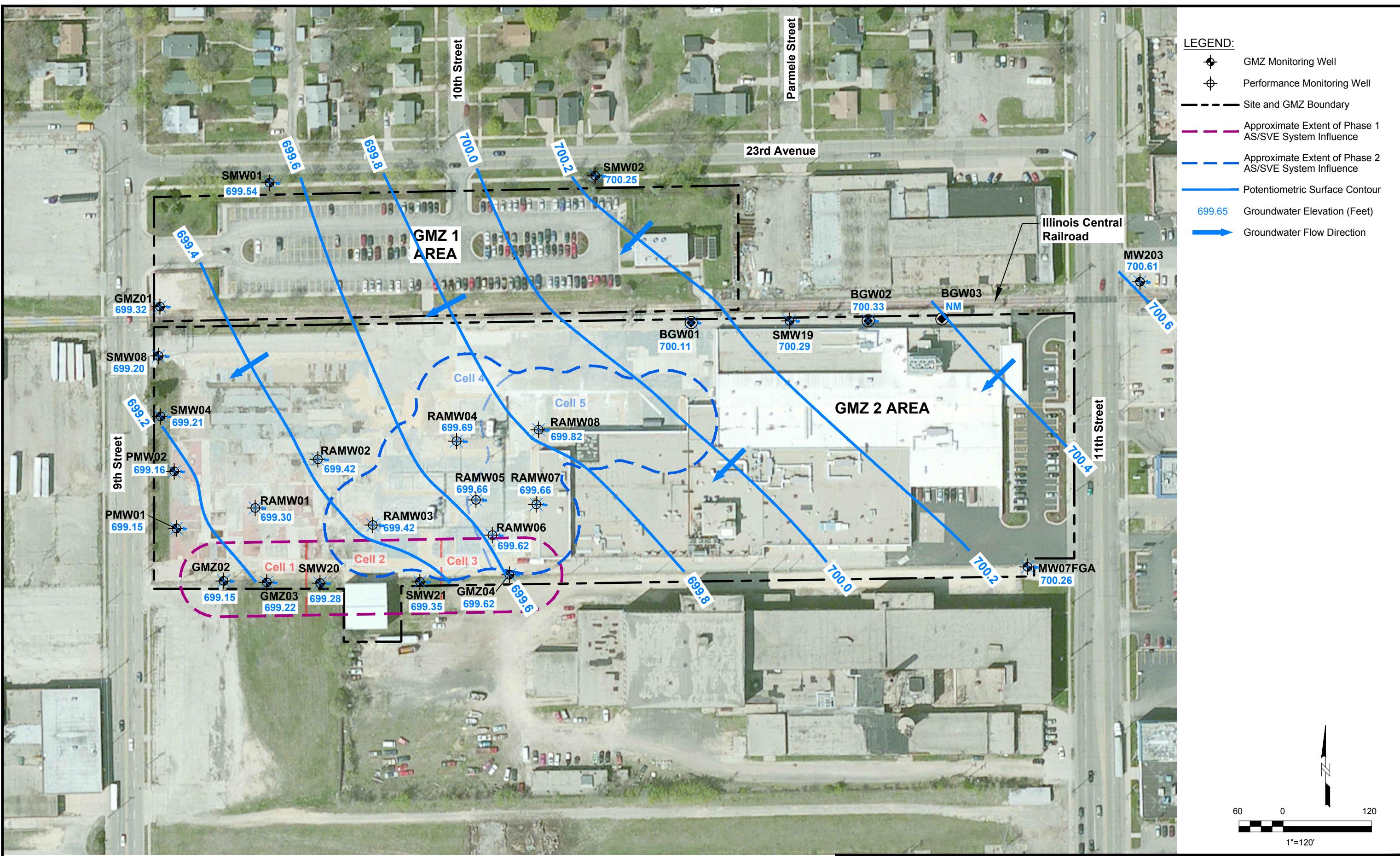
AECOM

GMZ / PERFORMANCE
WELL NETWORK

DATE: 8/2/18

DRWN: CCC

FIGURE 2

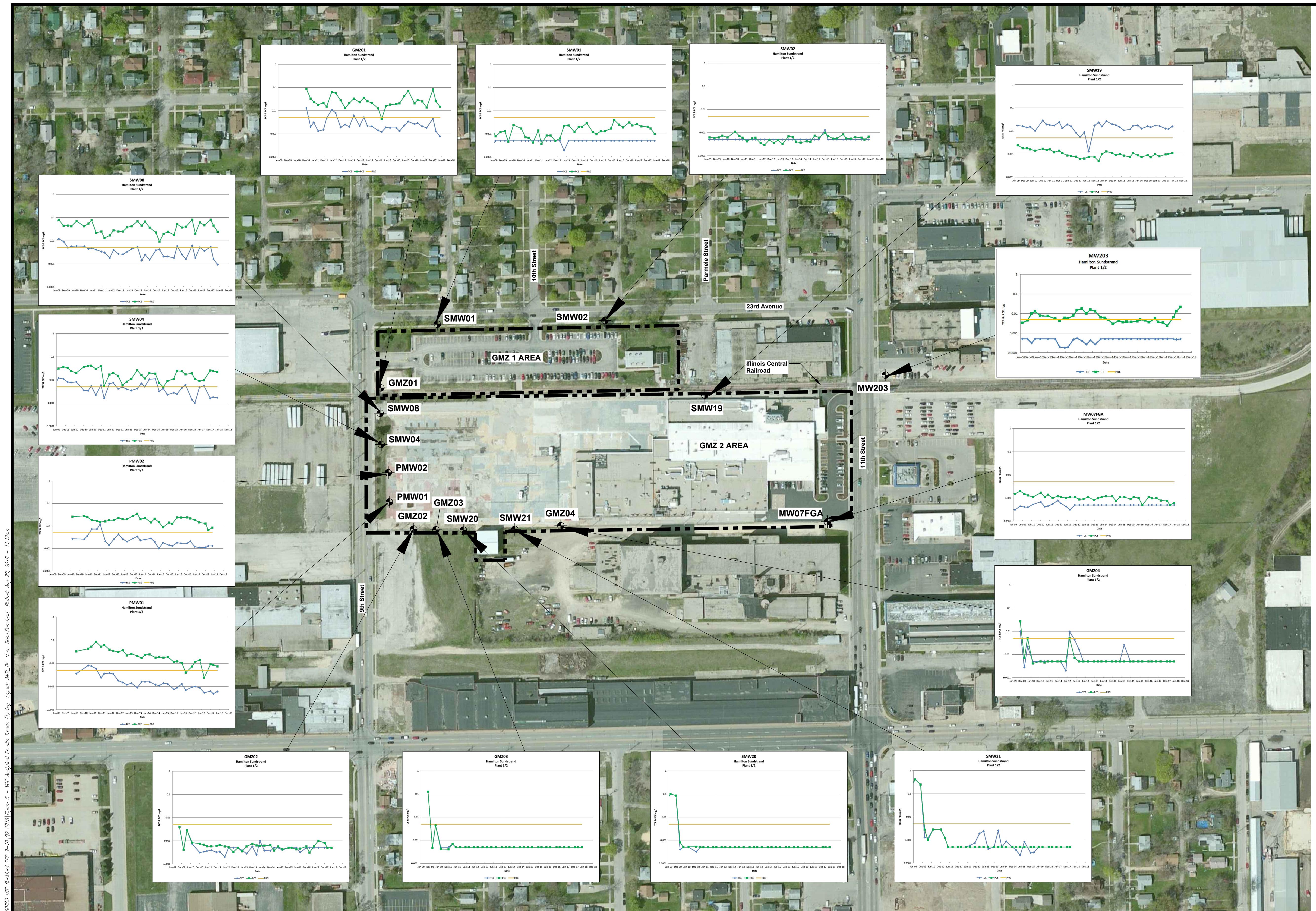




AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

AECOM

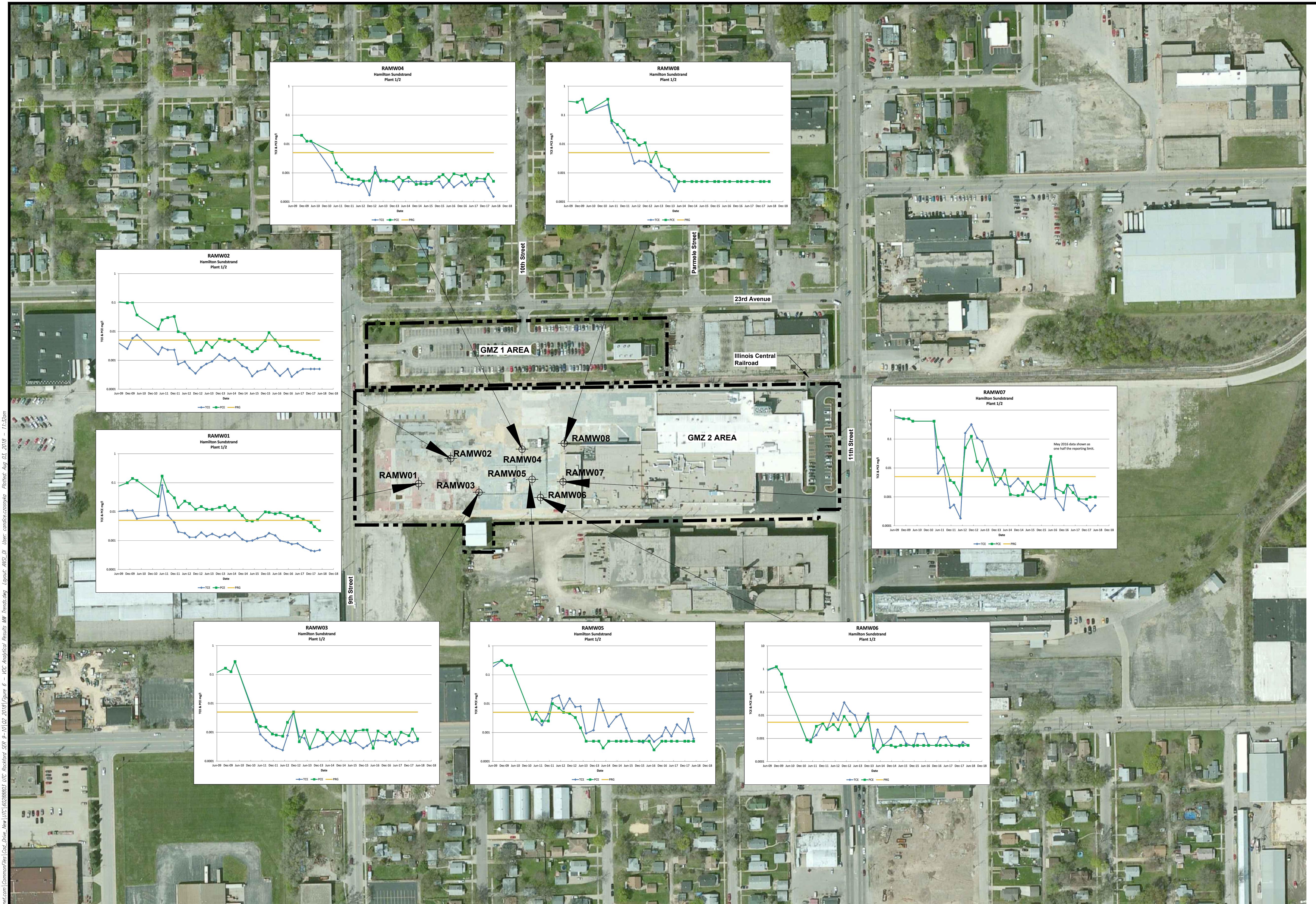
SECOND QUARTER 2018 ROLLING
12 MONTH GMZ WELL GROUNDWATER
ANALYTICAL RESULTS EXCEEDING THE PRG



AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

DATE: 8/20/2018 DRWN: CC

QUARTERLY GMZ VOC
ANALYTICAL RESULTS TRENDS


AECOM

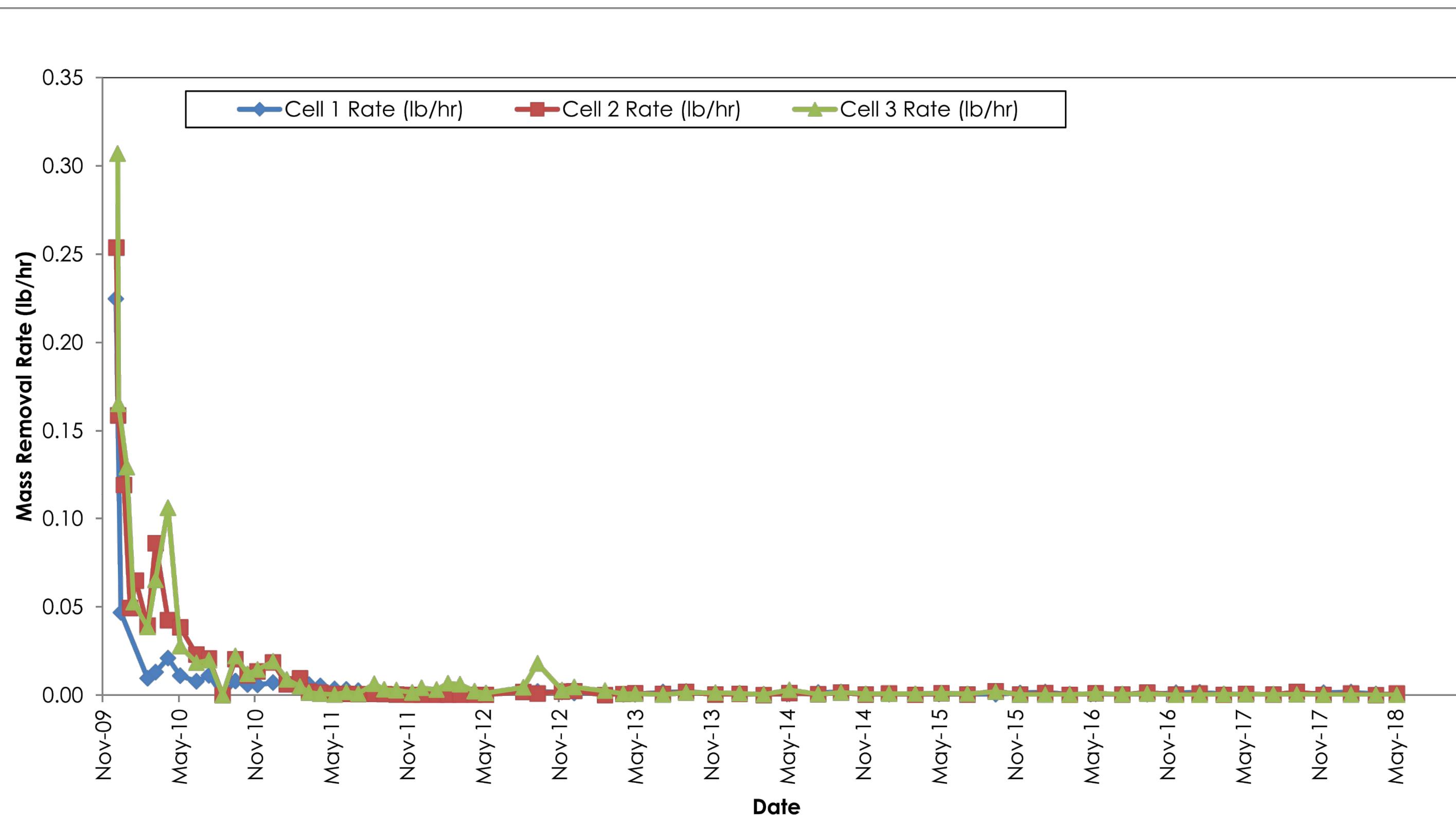
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

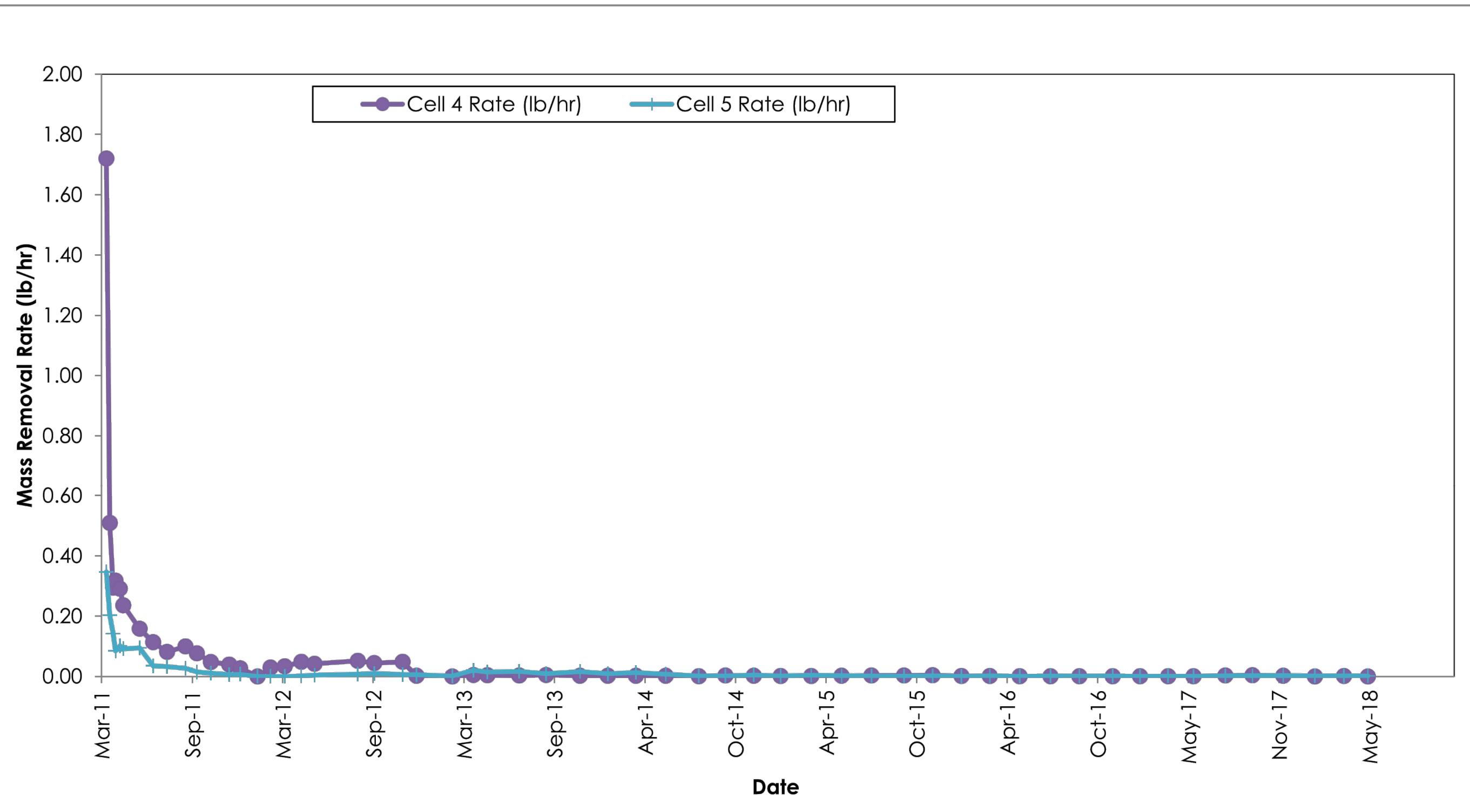
QUARTERLY PERFORMANCE
MONITORING WELL VOC
ANALYTICAL RESULTS TRENDS

DATE: 08/03/18

DRWN: CC

FIGURE 6





AECOM

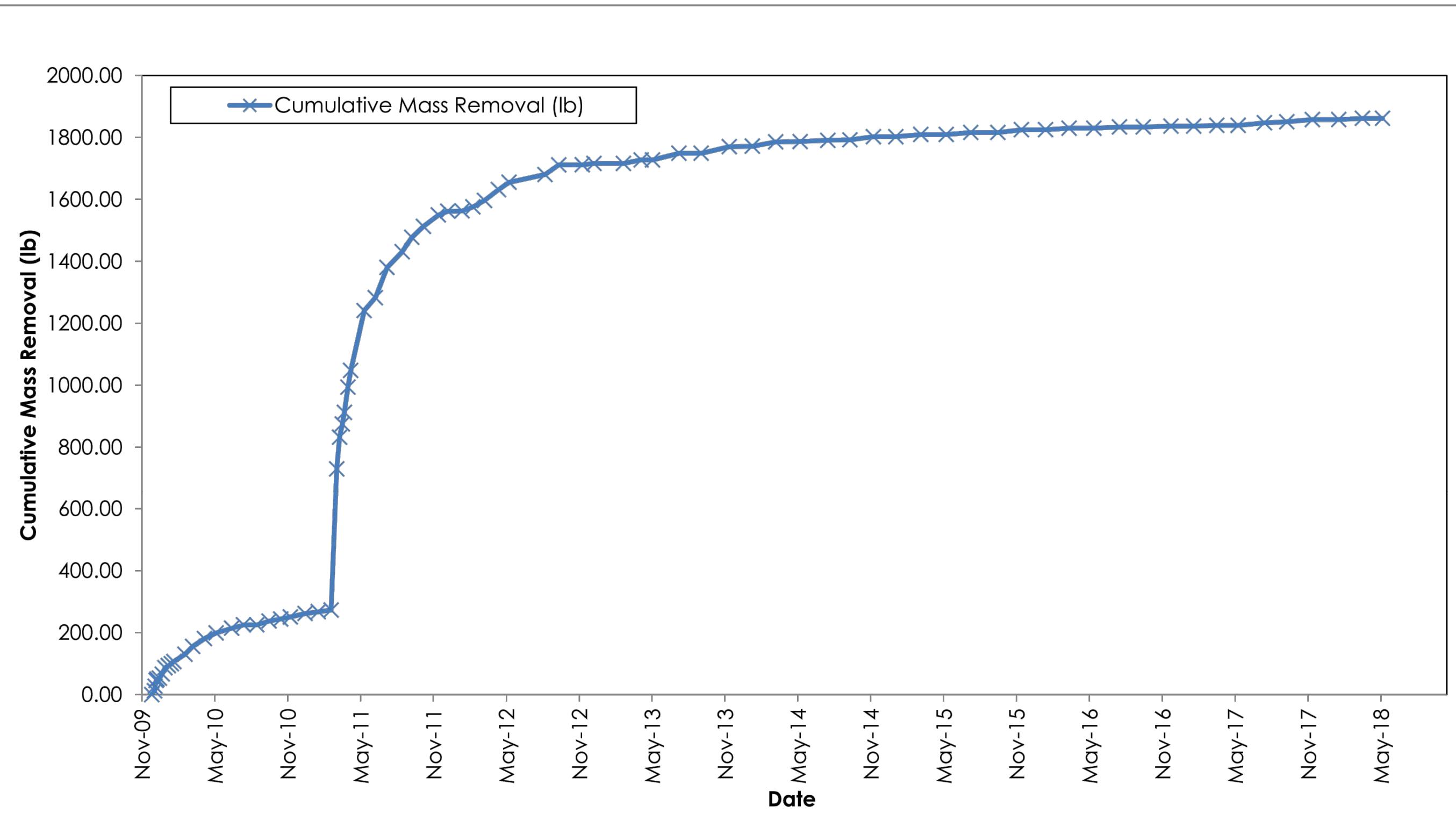
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

AVERAGE VOC MASS REMOVAL RATE
VS TIME PHASE 2 AS/SVE SYSTEM

DATE: 08/03/18

DRWN: CC

FIGURE 8



AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60562097.4213

CUMULATIVE MASS REMOVAL
PHASE 1/ PHASE 2 AS/SVE SYSTEM

DATE: 08/03/18 DRWN: CC

FIGURE 9

Appendix A

Second Quarter 2018 GMZ and Performance Monitoring Well Analytical Data

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
60562097

SGS Job Number: JC65632

Sampling Dates: 05/01/18 - 05/03/18



Report to:

AECOM, INC.
4320 Winfield Road
Warrenville, IL 60555
Peter.Hollatz@AECOM.com

ATTN: Peter Hollatz

Total number of pages in report: 438



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Diane Komar 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

SGS North America Inc. • 2235 Route 130 • Dayton, NJ 08810 • tel: 732-329-0200 • fax: 732-329-3499

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Sample Summary

United Technologies Corporation

Job No: JC65632

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Collected Date	Time By	Matrix Received	Client Code Type	Sample ID
JC65632-1	05/01/18	11:40	NP/AH05/07/18	AQ Field Blank Water	HSSER-FBLK01-050118
JC65632-2	05/01/18	12:45	NP/AH05/07/18	AQ Ground Water	HSSER-SMW08-050118
JC65632-3	05/01/18	13:40	NP/AH05/07/18	AQ Ground Water	HSSER-MW07FGA-050118
JC65632-4	05/01/18	14:35	NP/AH05/07/18	AQ Ground Water	HSSER-GMZ01-050118
JC65632-5	05/01/18	15:00	NP/AH05/07/18	AQ Ground Water	HSSER-SMW02-050118
JC65632-6	05/01/18	15:45	NP/AH05/07/18	AQ Ground Water	HSSER-SMW01-050118
JC65632-7	05/01/18	15:55	NP/AH05/07/18	AQ Ground Water	HSSER-MW203-051118
JC65632-8	05/02/18	08:55	NP/AH05/07/18	AQ Ground Water	HSSER-SMW19-050218
JC65632-9	05/02/18	10:15	NP/AH05/07/18	AQ Ground Water	HSSER-GMZ04-050218
JC65632-10	05/02/18	12:00	NP/AH05/07/18	AQ Ground Water	HSSER-SMW21-050218
JC65632-11	05/02/18	13:05	NP/AH05/07/18	AQ Ground Water	HSSER-SMW20-050218
JC65632-12	05/02/18	14:30	NP/AH05/07/18	AQ Ground Water	HSSER-GMZ03-050218
JC65632-13	05/02/18	15:50	NP/AH05/07/18	AQ Ground Water	HSSER-GMZ02-050218

Sample Summary

(continued)

United Technologies Corporation

Job No: JC65632

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
JC65632-13D	05/02/18	15:50	NP/AH05/07/18	AQ Water Dup/MSD	HSSER-MSD01-050218
JC65632-13S	05/02/18	15:50	NP/AH05/07/18	AQ Water Matrix Spike	HSSER-MS01-050218
JC65632-14	05/02/18	00:00	NP/AH05/07/18	AQ Ground Water	HSSER-DUP01-050218
JC65632-15	05/03/18	09:00	NP/AH05/07/18	AQ Ground Water	HSSER-PMW01-050318
JC65632-16	05/03/18	09:15	NP/AH05/07/18	AQ Equipment Blank	HSSER-EBLK01-050318
JC65632-17	05/03/18	10:25	NP/AH05/07/18	AQ Ground Water	HSSER-PMW02-050318
JC65632-18	05/03/18	11:40	NP/AH05/07/18	AQ Ground Water	HSSER-SMW04-050318
JC65632-19	05/03/18	11:40	NP/AH05/07/18	AQ Trip Blank Water	HSSER-TRIP01-050118

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: United Technologies Corporation

Job No JC65632

Site: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Report Date 5/21/2018 11:52:53 A

On 05/07/2018, 16 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 3.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC65632 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ

Batch ID: V2V2014

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC65719-5MS, JC65733-2DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ

Batch ID: V4B3388

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC65632-13MS, JC65632-13MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ

Batch ID: VA9204

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Sample(s) JC65633-9MS, JC65633-9MSD were used as the QC samples indicated.

- JC65632-19 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Page 1 of 3

Job Number: JC65632

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 05/01/18 thru 05/03/18

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
--------------------------	------------------	-----------------	----	-----	-------	--------

JC65632-1 HSSER-FBLK01-050118

No hits reported in this sample.

JC65632-2 HSSER-SMW08-050118

1,1-Dichloroethane	0.0079	0.0010	0.00021	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0013	0.0010	0.00050	mg/l	SW846 8260C
Tetrachloroethene	0.0245	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0034	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.00093 J	0.0010	0.00027	mg/l	SW846 8260C

JC65632-3 HSSER-MW07FGA-050118

Tetrachloroethene	0.00062 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00096 J	0.0010	0.00025	mg/l	SW846 8260C

JC65632-4 HSSER-GMZ01-050118

1,1-Dichloroethane	0.0086	0.0010	0.00021	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0011	0.0010	0.00050	mg/l	SW846 8260C
Tetrachloroethene	0.0149	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0020	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.00077 J	0.0010	0.00027	mg/l	SW846 8260C

JC65632-5 HSSER-SMW02-050118

1,1-Dichloroethane	0.00045 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.00067 J	0.0010	0.00050	mg/l	SW846 8260C

JC65632-6 HSSER-SMW01-050118

Tetrachloroethene	0.0010	0.0010	0.00050	mg/l	SW846 8260C
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JC65632-7 HSSER-MW203-051118

Tetrachloroethene	0.0218	0.0010	0.00050	mg/l	SW846 8260C
Trichloroethene	0.00050 J	0.0010	0.00027	mg/l	SW846 8260C

JC65632-8 HSSER-SMW19-050218

cis-1,2-Dichloroethene	0.0017	0.0010	0.00050	mg/l	SW846 8260C
Tetrachloroethene	0.0011	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00038 J	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.0156	0.0010	0.00027	mg/l	SW846 8260C

Summary of Hits

Page 2 of 3

Job Number: JC65632

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 05/01/18 thru 05/03/18

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
--------------------------	------------------	-----------------	----	-----	-------	--------

JC65632-9 HSSER-GMZ04-050218

1,1-Dichloroethane	0.00075 J	0.0010	0.00021	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.00067 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0145	0.0010	0.00025	mg/l	SW846 8260C

JC65632-10 HSSER-SMW21-050218

1,1,1-Trichloroethane	0.0046	0.0010	0.00025	mg/l	SW846 8260C
-----------------------	--------	--------	---------	------	-------------

JC65632-11 HSSER-SMW20-050218

1,1-Dichloroethane	0.00027 J	0.0010	0.00021	mg/l	SW846 8260C
--------------------	-----------	--------	---------	------	-------------

JC65632-12 HSSER-GMZ03-050218

1,1-Dichloroethane	0.00046 J	0.0010	0.00021	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00026 J	0.0010	0.00025	mg/l	SW846 8260C

JC65632-13 HSSER-GMZ02-050218

1,1-Dichloroethane	0.00055 J	0.0010	0.00021	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00047 J	0.0010	0.00025	mg/l	SW846 8260C

JC65632-14 HSSER-DUP01-050218

1,1-Dichloroethane	0.00047 J	0.0010	0.00021	mg/l	SW846 8260C
--------------------	-----------	--------	---------	------	-------------

JC65632-15 HSSER-PMW01-050318

1,1-Dichloroethane	0.00066 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.0074	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0015	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.00061 J	0.0010	0.00027	mg/l	SW846 8260C

JC65632-16 HSSER-EBLK01-050318

No hits reported in this sample.

JC65632-17 HSSER-PMW02-050318

1,1-Dichloroethane	0.0036	0.0010	0.00021	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0192	0.0010	0.00050	mg/l	SW846 8260C
Tetrachloroethene	0.0085	0.0010	0.00050	mg/l	SW846 8260C

Summary of Hits

Page 3 of 3

Job Number: JC65632

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 05/01/18 thru 05/03/18

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
--------------------------	------------------	-----------------	----	-----	-------	--------

1,1,1-Trichloroethane	0.0017	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.0013	0.0010	0.00027	mg/l	SW846 8260C
Vinyl chloride	0.0059	0.0010	0.00062	mg/l	SW846 8260C

JC65632-18 HSSER-SMW04-050318

1,1-Dichloroethane	0.0055	0.0010	0.00021	mg/l	SW846 8260C
1,1-Dichloroethene	0.00072 J	0.0010	0.00047	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0069	0.0010	0.00050	mg/l	SW846 8260C
Tetrachloroethene	0.0220	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0043	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.0017	0.0010	0.00027	mg/l	SW846 8260C
Vinyl chloride	0.0031	0.0010	0.00062	mg/l	SW846 8260C

JC65632-19 HSSER-TRIP01-050118

No hits reported in this sample.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Page 1 of 1

Client Sample ID: HSSER-FBLK01-050118**Lab Sample ID:** JC65632-1**Date Sampled:** 05/01/18**Matrix:** AQ - Field Blank Water**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81673.D	1	05/08/18 23:17	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

4.1

4

SGS North America Inc.

Report of Analysis

Page 1 of 1

4.2
4**Client Sample ID:** HSSER-SMW08-050118**Lab Sample ID:** JC65632-2**Matrix:** AQ - Ground Water**Method:** SW846 8260C**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Date Sampled:** 05/01/18**Date Received:** 05/07/18**Percent Solids:** n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81674.D	1	05/08/18 23:45	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0079	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0013	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0245	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0034	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00093	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Page 1 of 1

4.3
4**Client Sample ID:** HSSER-MW07FGA-050118**Lab Sample ID:** JC65632-3**Matrix:** AQ - Ground Water**Method:** SW846 8260C**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Date Sampled:** 05/01/18**Date Received:** 05/07/18**Percent Solids:** n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81675.D	1	05/09/18 00:13	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00062	0.0010	0.00050	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00096	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ01-050118	Date Sampled:	05/01/18
Lab Sample ID:	JC65632-4	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81676.D	1	05/09/18 00:41	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0086	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0011	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0149	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0020	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00077	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW02-050118	Date Sampled:	05/01/18
Lab Sample ID:	JC65632-5	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81677.D	1	05/09/18 01:09	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00045	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00067	0.0010	0.00050	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW01-050118	Date Sampled:	05/01/18
Lab Sample ID:	JC65632-6	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81678.D	1	05/09/18 01:37	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0010	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID: HSSER-MW203-051118**Lab Sample ID:** JC65632-7**Date Sampled:** 05/01/18**Matrix:** AQ - Ground Water**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81679.D	1	05/09/18 02:05	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0218	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00050	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID: HSSER-SMW19-050218**Lab Sample ID:** JC65632-8**Matrix:** AQ - Ground Water**Method:** SW846 8260C**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Date Sampled:** 05/02/18**Date Received:** 05/07/18**Percent Solids:** n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81680.D	1	05/09/18 02:33	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0017	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0011	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00038	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.0156	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	110%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ04-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-9	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81681.D	1	05/09/18 03:01	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00075	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.00067	0.0010	0.00050	mg/l	J
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0145	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-120%
17060-07-0	1,2-Dichloroethane-D4	111%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW21-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-10	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81682.D	1	05/09/18 03:29	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0046	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-SMW20-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-11	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81683.D	1	05/09/18 03:57	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00027	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		80-120%
17060-07-0	1,2-Dichloroethane-D4	113%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	99%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Client Sample ID:	HSSER-GMZ03-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-12	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81684.D	1	05/09/18 04:25	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00046	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00026	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	98%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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4.13

4

Client Sample ID:	HSSER-GMZ02-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-13	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81669.D	1	05/08/18 21:25	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00055	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00047	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-120%
17060-07-0	1,2-Dichloroethane-D4	109%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-DUP01-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65632-14	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81685.D	1	05/09/18 04:53	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00047	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		80-120%
17060-07-0	1,2-Dichloroethane-D4	115%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	100%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

4.14

4

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Report of Analysis

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4.15
4

Client Sample ID:	HSSER-PMW01-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65632-15	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81686.D	1	05/09/18 05:21	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00066	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0074	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0015	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00061	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		80-120%
17060-07-0	1,2-Dichloroethane-D4	112%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

ND = Not detected MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Report of Analysis

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4.16
4**Client Sample ID:** HSSER-EBLK01-050318**Lab Sample ID:** JC65632-16**Date Sampled:** 05/03/18**Matrix:** AQ - Equipment Blank**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4B81687.D	1	05/09/18 05:49	HT	n/a	n/a	V4B3388
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		80-120%
17060-07-0	1,2-Dichloroethane-D4	115%		81-124%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	HSSER-PMW02-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65632-17	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241514.D	1	05/08/18 17:18	OI	n/a	n/a	VA9204
Run #2	2V50470.D	1	05/09/18 17:16	JP	n/a	n/a	V2V2014

Purge Volume	
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0036	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0192	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0085	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0017	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.0013	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	0.0059 ^a	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	97%	113%	81-124%
2037-26-5	Toluene-D8	89%	104%	80-120%
460-00-4	4-Bromofluorobenzene	91%	105%	80-120%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

4.17
4

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Report of Analysis

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4.18
4

Client Sample ID:	HSSER-SMW04-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65632-18	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241515.D	1	05/08/18 17:47	OI	n/a	n/a	VA9204
Run #2	2V50469.D	1	05/09/18 16:50	JP	n/a	n/a	V2V2014

Purge Volume	
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0055	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	0.00072	0.0010	0.00047	mg/l	J
156-59-2	cis-1,2-Dichloroethene	0.0069	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0220	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0043	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.0017	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride	0.0031 ^a	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%	114%	80-120%
17060-07-0	1,2-Dichloroethane-D4	95%	120%	81-124%
2037-26-5	Toluene-D8	91%	114%	80-120%
460-00-4	4-Bromofluorobenzene	92%	106%	80-120%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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4.19

4

Client Sample ID:	HSSER-TRIP01-050118	Date Sampled:	05/03/18
Lab Sample ID:	JC65632-19	Date Received:	05/07/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241516.D	1	05/08/18 18:17	OI	n/a	n/a	VA9204
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	91%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Misc. Forms**5****Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



6W

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

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FED-EX Tracking # 4357 6345 2409 Bottle Order Control # DK-042318-106
SGS Quote # SGS Job # JC65632

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)		Matrix Codes													
Company Name: AECOM Street Address: 4320 WINFIELD RD * 300 City: WAVERVILLE IL 60555 State: IL Zip: 60555 Project Contact: Peter Hollatz / peter.hollatz@aecom.com Phone #: 608562097 Fax #: Sampler(s) Name(s): N. PINS / A. HOLLATZ Phone #: Project Manager: PETER HOLLATZ Attention: 		Project Name: UTAS PLANTS 1/2 FACILITY Street: Billing Information (if different from Report to) Company Name: Project #: Street Address: Client Purchase Order #: City: State: Zip: 		* VOCs		DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIO - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank													
Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection	# of bottles	Number of preserved bottles														
			Date	Time	Sampled by		Matrix	HCl	NaOH	HNO3	H2SO4	NONE	D/Water	MEIGH	ENCORE				
1	HSSEN-FBLK01-050118		5/1/18	1140	NP		GW	3	3							X			
2	HSSEN-SMW08-050118		5/1/18	1245	NP		GW	3	3							X			
3	HSSEN-MW07FGA-050118		5/1/18	1340	AH		GW	3	3							X			
4	HSSEN-GMZ01-050118		5/1/18	1435	NP		GW	3	3							X			
5	HSSEN-SMW02-050118		5/1/18	1500	AH		GW	3	3							X			
6	HSSEN-SMW01-050118		5/1/18	1545	NP		GW	3	3							X			
7	HSSEN-MW203-050118		5/1/18	1555	AH		GW	3	3							X			
8	HSSEN-SMW19-050218		5/2/18	0855	NP	GW	3	3							X				
9	HSSEN-GMZ04-050218		5/2/18	1015	NP	GW	3	3							X				
10	HSSEN-SMW21-050218		5/2/18	1200	NP	GW	3	3							X				
11	HSSEN-SMW20-050218		5/2/18	1305	NP	GW	3	3							X				
Turnaround Time (Business days)		Data Deliverable Information		Comments / Special Instructions															
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: _____		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____		* LIST OF 13 VOCs IV QC											
Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data														Sample inventory is verified upon receipt in the Laboratory					
Emergency & Rush T/A data available via LabLink																			
Sample Custody must be documented below each time samples change possession, including courier delivery.																			
1	Relinquished by Sampler: N. PINS (AECOM)	Date Time: 5/3/18 1315	Received By: 1	Relinquished By: FedEx	Date Time: 5/7/18 9:30	Received By: 2													
3	Relinquished by Sampler:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 5													
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	<input type="checkbox"/> Intact <input type="checkbox"/> Not intact	Preserved where applicable	On Ice	Cooler Temp.	2.1										

Form:SM088-03C (revised 2/12/18)

<http://www.sgs.com/en/terms-and-conditions>

JC65632: Chain of Custody
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CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

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FED-EX Tracking # 4357 6345 2469	Bottle Order Control # JC65632
SGS Quote #	SGS Job #

Client / Reporting Information		Project Information										Requested Analysis (see TEST CODE sheet)				Matrix Codes													
Company Name AECOM Street Address 4320 WINFIELD RD #300 City WANDELLVILLE State IL Zip 60555		Project Name: UTAS PLANTS 1/2 FACILITY Street ROCKFORD IL Billing Information (if different from Report to)																											
Project Contact PETER HOLLATZ/peter.hollatz@ehsusa.com Phone # 60562097		Project # 60562097 Street Address Client Purchase Order # City ROCKFORD State IL Zip 60555																											
Sampler(s) Name(s) N. PINS / A. HOLLATZ		Phone # Project Manager PETER HOLLATZ Attention:																											
Lab Sample # 12 HSSELR-GM203-050218 13 HSSELR-GM202-050218 14 HSSELR-M501-050218 15 HSSELR-MSDC1-050218 16 HSSELR-DL4P01-050218 17 HSSEVL-PMW01-050318 18 HSSELR-EBLK01-050318 19 HSSELR-PMW02-050318 20 HSSELR-SMW04-050318 21 HSSELR-TRIP01-050118 22	Field ID / Point of Collection HSSELR-GM203-050218 HSSELR-GM202-050218 HSSELR-M501-050218 HSSELR-MSDC1-050218 HSSELR-DL4P01-050218 HSSEVL-PMW01-050318 HSSELR-EBLK01-050318 HSSELR-PMW02-050318 HSSELR-SMW04-050318 HSSELR-TRIP01-050118 22	Collection			Number of preserved bottles <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"># of bottles</td> <td style="width: 15%;">HCl</td> <td style="width: 15%;">NaOH</td> <td style="width: 15%;">HCO3</td> <td style="width: 15%;">H2O2</td> <td style="width: 15%;">None</td> <td style="width: 15%;">DI Water</td> <td style="width: 15%;">MEOH</td> <td style="width: 15%;">ENCORE</td> </tr> <tr> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	# of bottles	HCl	NaOH	HCO3	H2O2	None	DI Water	MEOH	ENCORE	3	3	3	3	3	3	3	3	3	* VOCs					
		# of bottles	HCl	NaOH		HCO3	H2O2	None	DI Water	MEOH	ENCORE																		
3	3	3	3	3	3	3	3	3																					
Date 5/2/18	Time 1430	Sampled by NP	Matrix GW																										
13																													
14																													
15																													
16																													
17																													
18																													
19																													
20																													
21																													
22																													
Turnaround Time (Business days)		Data Deliverable Information										Comments / Special Instructions																	
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: _____ _____ _____ _____ _____ _____										<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format _____ <input type="checkbox"/> Other _____ <i>NJ Data of Known Quality Protocol Reporting</i> Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data																	
Sample inventory is verified upon receipt in the Laboratory																													
Sample Custody must be documented below each time samples change possession, including courier delivery.																													
Relinquished by Sampler: 1 N.L. 12 (AECOM) Date Time: 5/13/18 1315		Received By: 1 FedEx		Relinquished By: 2 FedEx		Date Time: 5/13/18 9:30		Received By: 2																					
Relinquished by Sampler: 3		Received By: 3		Relinquished By: 4		Date Time: 5/13/18 9:30		Received By: 4																					
Relinquished by: 5		Date Time: 5		Received By:		Custody Seal #		<input type="checkbox"/> Intact	Preserved where applicable	<input type="checkbox"/> On Ice	Cooler Temp: 21																		

Form:SM088-03C (revised 2/12/18)

<http://www.sgs.com/en/terms-and-conditions>

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JC65632: Chain of Custody
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SGS Sample Receipt Summary

Job Number: JC65632 Client: AECOM, INC. Project: ENSRILW: UTAS PLANTS 1/2 FACILITY, ROCKF
 Date / Time Received: 5/7/2018 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (2.1);

Cooler Temps (Corrected) °C: Cooler 1: (3.6);

Cooler Security	<u>Y or N</u>	<u>Y or N</u>	Sample Integrity - Documentation	<u>Y or N</u>		
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	 		
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/> <input type="checkbox"/>	 		
Cooler Temperature		<u>Y or N</u>	Sample Integrity - Condition			
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>		1. Sample rcvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
2. Cooler temp verification:	IR Gun		2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
3. Cooler media:	Ice (Bag)		3. Condition of sample:	Intact		
4. No. Coolers:	1					
Quality Control Preservation		<u>Y or N</u>	<u>N/A</u>	Sample Integrity - Instructions	<u>Y or N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		2. Bottles received for unspecified tests	<input type="checkbox"/> <input checked="" type="checkbox"/>		
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/>		3. Sufficient volume rcvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>		
4. VOCs headspace free:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
			5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		

Test Strip Lot #: pH 1-12: 216017 pH 12+: 208717 Other: (Specify) _____

Comments

SM089-03
Rev. Date 12/7/17

JC65632: Chain of Custody

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Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JC65632ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC65632-1	Collected: 01-MAY-18 11:40 By: NP/AH Received: 07-MAY-18 By: DG HSSER-FBLK01-050118					
JC65632-1	SW846 8260C	08-MAY-18 23:17 HT				V8260SL
JC65632-2	Collected: 01-MAY-18 12:45 By: NP/AH Received: 07-MAY-18 By: DG HSSER-SMW08-050118					
JC65632-2	SW846 8260C	08-MAY-18 23:45 HT				V8260SL
JC65632-3	Collected: 01-MAY-18 13:40 By: NP/AH Received: 07-MAY-18 By: DG HSSER-MW07FGA-050118					
JC65632-3	SW846 8260C	09-MAY-18 00:13 HT				V8260SL
JC65632-4	Collected: 01-MAY-18 14:35 By: NP/AH Received: 07-MAY-18 By: DG HSSER-GMZ01-050118					
JC65632-4	SW846 8260C	09-MAY-18 00:41 HT				V8260SL
JC65632-5	Collected: 01-MAY-18 15:00 By: NP/AH Received: 07-MAY-18 By: DG HSSER-SMW02-050118					
JC65632-5	SW846 8260C	09-MAY-18 01:09 HT				V8260SL
JC65632-6	Collected: 01-MAY-18 15:45 By: NP/AH Received: 07-MAY-18 By: DG HSSER-SMW01-050118					
JC65632-6	SW846 8260C	09-MAY-18 01:37 HT				V8260SL
JC65632-7	Collected: 01-MAY-18 15:55 By: NP/AH Received: 07-MAY-18 By: DG HSSER-MW203-051118					
JC65632-7	SW846 8260C	09-MAY-18 02:05 HT				V8260SL
JC65632-8	Collected: 02-MAY-18 08:55 By: NP/AH Received: 07-MAY-18 By: DG HSSER-SMW19-050218					
JC65632-8	SW846 8260C	09-MAY-18 02:33 HT				V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JC65632ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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JC65632-9 Collected: 02-MAY-18 10:15 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-GMZ04-050218

JC65632-9 SW846 8260C 09-MAY-18 03:01 HT V8260SL

JC65632-10 Collected: 02-MAY-18 12:00 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-SMW21-050218

JC65632-10 SW846 8260C 09-MAY-18 03:29 HT V8260SL

JC65632-11 Collected: 02-MAY-18 13:05 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-SMW20-050218

JC65632-11 SW846 8260C 09-MAY-18 03:57 HT V8260SL

JC65632-12 Collected: 02-MAY-18 14:30 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-GMZ03-050218

JC65632-12 SW846 8260C 09-MAY-18 04:25 HT V8260SL

JC65632-13 Collected: 02-MAY-18 15:50 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-GMZ02-050218

JC65632-13 SW846 8260C 08-MAY-18 21:25 HT V8260SL

JC65632-14 Collected: 02-MAY-18 00:00 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-DUP01-050218

JC65632-14 SW846 8260C 09-MAY-18 04:53 HT V8260SL

JC65632-15 Collected: 03-MAY-18 09:00 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-PMW01-050318

JC65632-15 SW846 8260C 09-MAY-18 05:21 HT V8260SL

JC65632-16 Collected: 03-MAY-18 09:15 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-EBLK01-050318

JC65632-16 SW846 8260C 09-MAY-18 05:49 HT V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JC65632

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
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JC65632-17 Collected: 03-MAY-18 10:25 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-PMW02-050318JC65632-17 SW846 8260C 08-MAY-18 17:18 OI V8260SL
JC65632-17 SW846 8260C 09-MAY-18 17:16 JP V8260SLJC65632-18 Collected: 03-MAY-18 11:40 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-SMW04-050318JC65632-18 SW846 8260C 08-MAY-18 17:47 OI V8260SL
JC65632-18 SW846 8260C 09-MAY-18 16:50 JP V8260SLJC65632-19 Collected: 03-MAY-18 11:40 By: NP/AH Received: 07-MAY-18 By: DG
HSSEN-TRIP01-050118

JC65632-19 SW846 8260C 08-MAY-18 18:17 OI V8260SL

SGS Internal Chain of Custody

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Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

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Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65632-1.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-1.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-1.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-1.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-2.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-2.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-2.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-2.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-3.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-3.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-3.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-3.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-4.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-4.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-4.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-4.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-5.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-5.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-5.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-5.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-6.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-6.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-6.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-6.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-7.2	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-7.2	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-7.2	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-7.2	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-8.2	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-8.2	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-8.2	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-8.2	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-9.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-9.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-9.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-9.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage

SGS Internal Chain of Custody

Page 2 of 3

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65632-10.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-10.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-10.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-10.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-11.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-11.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-11.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-11.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-12.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-12.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-12.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-12.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-13.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-13.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-13.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-13.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-13.4	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-13.4	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-13.4	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-13.4	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-13.8	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-13.8	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-13.8	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-13.8	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-14.1	Secured Storage	Hueanh Tran	05/08/18 11:42	Retrieve from Storage
JC65632-14.1	Hueanh Tran	GCMS4B	05/08/18 11:42	Load on Instrument
JC65632-14.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-14.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-15.1	Secured Storage	Hueanh Tran	05/08/18 11:43	Retrieve from Storage
JC65632-15.1	Hueanh Tran	GCMS4B	05/08/18 11:43	Load on Instrument
JC65632-15.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument
JC65632-15.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-16.1	Secured Storage	Hueanh Tran	05/08/18 11:43	Retrieve from Storage
JC65632-16.1	Hueanh Tran	GCMS4B	05/08/18 11:43	Load on Instrument
JC65632-16.1	GCMS4B	Hueanh Tran	05/09/18 09:59	Unload from Instrument

SGS Internal Chain of Custody

Page 3 of 3

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65632-16.1	Hueanh Tran	Secured Storage	05/09/18 09:59	Return to Storage
JC65632-17.1	Secured Storage	Jessica Potts	05/09/18 14:41	Retrieve from Storage
JC65632-17.1	Jessica Potts	GCMS2V	05/09/18 14:41	Load on Instrument
JC65632-17.1	GCMS2V	Jessica Potts	05/10/18 08:27	Unload from Instrument
JC65632-17.1	Jessica Potts	Secured Storage	05/10/18 08:27	Return to Storage
JC65632-17.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65632-17.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65632-17.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65632-17.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65632-17.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65632-17.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65632-18.1	Secured Storage	Jessica Potts	05/09/18 14:41	Retrieve from Storage
JC65632-18.1	Jessica Potts	GCMS2V	05/09/18 14:41	Load on Instrument
JC65632-18.1	GCMS2V	Jessica Potts	05/10/18 08:27	Unload from Instrument
JC65632-18.1	Jessica Potts	Secured Storage	05/10/18 08:27	Return to Storage
JC65632-18.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65632-18.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65632-18.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65632-18.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65632-18.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65632-18.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65632-19.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65632-19.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65632-19.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65632-19.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65632-19.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65632-19.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage

MS Volatiles**QC Data Summaries**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries



Method Blank Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-MB	A241498.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18, JC65632-19

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.31	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	98%
17060-07-0	1,2-Dichloroethane-D4	95%
2037-26-5	Toluene-D8	90%
460-00-4	4-Bromofluorobenzene	93%

Method Blank Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3388-MB	4B81668.D	1	05/08/18	HT	n/a	n/a	V4B3388

The QC reported here applies to the following samples:**Method: SW846 8260C**

JC65632-1, JC65632-2, JC65632-3, JC65632-4, JC65632-5, JC65632-6, JC65632-7, JC65632-8, JC65632-9, JC65632-10, JC65632-11, JC65632-12, JC65632-13, JC65632-14, JC65632-15, JC65632-16

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	107%
17060-07-0	1,2-Dichloroethane-D4	110%
2037-26-5	Toluene-D8	99%
460-00-4	4-Bromofluorobenzene	100%

Method Blank Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V2014-MB	2V50460.D	1	05/09/18	JP	n/a	n/a	V2V2014

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	107%
17060-07-0	1,2-Dichloroethane-D4	118%
2037-26-5	Toluene-D8	108%
460-00-4	4-Bromofluorobenzene	107%

Method Blank Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V2014-MB2	2V50480.D	1	05/10/18	JP	n/a	n/a	V2V2014

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65719-5MS

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No. Surrogate Recoveries

		Limits	
1868-53-7	Dibromofluoromethane	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	121%	81-124%
2037-26-5	Toluene-D8	103%	80-120%
460-00-4	4-Bromofluorobenzene	106%	80-120%

Method Blank Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-MB2	A241548.D	1	05/10/18	OL	n/a	n/a	VA9204

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65633-9MS, JC65633-9MSD

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CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.31	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101%
17060-07-0	1,2-Dichloroethane-D4	99%
2037-26-5	Toluene-D8	92%
460-00-4	4-Bromofluorobenzene	93%

Blank Spike Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-BS	A241496.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:**Method:** SW846 8260C

JC65632-17, JC65632-18, JC65632-19

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	46.2	92	72-124
107-06-2	1,2-Dichloroethane	50	47.2	94	66-150
75-35-4	1,1-Dichloroethene	50	52.4	105	61-132
156-59-2	cis-1,2-Dichloroethene	50	50.1	100	71-119
156-60-5	trans-1,2-Dichloroethene	50	50.7	101	71-123
100-41-4	Ethylbenzene	50	48.0	96	77-124
75-09-2	Methylene chloride	50	53.5	107	69-122
127-18-4	Tetrachloroethene	50	48.8	98	70-136
108-88-3	Toluene	50	43.8	88	76-126
71-55-6	1,1,1-Trichloroethane	50	56.6	113	77-136
79-00-5	1,1,2-Trichloroethane	50	48.5	97	75-123
79-01-6	Trichloroethene	50	49.6	99	79-126
75-01-4	Vinyl chloride	50	60.7	121	56-146

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	94%	64-135%
2037-26-5	Toluene-D8	91%	76-117%
460-00-4	4-Bromofluorobenzene	96%	72-122%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V4B3388-BS	4B81666.D	1	05/08/18	HT	n/a	n/a	V4B3388

The QC reported here applies to the following samples:**Method:** SW846 8260C

JC65632-1, JC65632-2, JC65632-3, JC65632-4, JC65632-5, JC65632-6, JC65632-7, JC65632-8, JC65632-9, JC65632-10, JC65632-11, JC65632-12, JC65632-13, JC65632-14, JC65632-15, JC65632-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	52.2	104	79-120
107-06-2	1,2-Dichloroethane	50	49.6	99	78-126
75-35-4	1,1-Dichloroethene	50	53.9	108	69-126
156-59-2	cis-1,2-Dichloroethene	50	50.9	102	80-120
156-60-5	trans-1,2-Dichloroethene	50	52.1	104	76-120
100-41-4	Ethylbenzene	50	50.8	102	80-120
75-09-2	Methylene chloride	50	51.0	102	77-120
127-18-4	Tetrachloroethene	50	51.3	103	70-131
108-88-3	Toluene	50	50.2	100	80-120
71-55-6	1,1,1-Trichloroethane	50	55.8	112	81-128
79-00-5	1,1,2-Trichloroethane	50	50.5	101	83-118
79-01-6	Trichloroethene	50	52.3	105	80-120
75-01-4	Vinyl chloride	50	49.6	99	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-120%
17060-07-0	1,2-Dichloroethane-D4	104%	81-124%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	104%	80-120%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JC65632
Account: UTC United Technologies Corporation
Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2V2014-BS	2V50458.D	1	05/09/18	JP	n/a	n/a	V2V2014

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-01-4	Vinyl chloride	50	47.5	95	51-135

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	80-120%
17060-07-0	1,2-Dichloroethane-D4	117%	81-124%
2037-26-5	Toluene-D8	106%	80-120%
460-00-4	4-Bromofluorobenzene	100%	80-120%

* = Outside of Control Limits.

Matrix Spike Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC65719-5MS	2V50481.D	1	05/10/18	JP	n/a	n/a	V2V2014
JC65719-5	2V50464.D	1	05/09/18	JP	n/a	n/a	V2V2014

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18

CAS No.	Compound	JC65719-5		Spike	MS	MS	Limits
		ug/l	Q	ug/l	ug/l	%	
75-01-4	Vinyl chloride	ND		50	58.6	117	43-146
CAS No. Surrogate Recoveries							
CAS No.	Surrogate	Recoveries	MS	JC65719-5		Limits	
1868-53-7	Dibromofluoromethane		107%	112%		80-120%	
17060-07-0	1,2-Dichloroethane-D4		121%	115%		81-124%	
2037-26-5	Toluene-D8		102%	107%		80-120%	
460-00-4	4-Bromofluorobenzene		101%	105%		80-120%	

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC65632-13MS	4B81670.D	1	05/08/18	HT	n/a	n/a	V4B3388
JC65632-13MSD	4B81671.D	1	05/08/18	HT	n/a	n/a	V4B3388
JC65632-13	4B81669.D	1	05/08/18	HT	n/a	n/a	V4B3388

The QC reported here applies to the following samples:**Method:** SW846 8260C

JC65632-1, JC65632-2, JC65632-3, JC65632-4, JC65632-5, JC65632-6, JC65632-7, JC65632-8, JC65632-9, JC65632-10, JC65632-11, JC65632-12, JC65632-13, JC65632-14, JC65632-15, JC65632-16

CAS No.	Compound	JC65632-13		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	0.55	J	50	51.3	102	50	51.0	101	1	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	47.2	94	50	47.4	95	0	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	54.4	109	50	53.0	106	3	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	50.2	100	50	50.4	101	0	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	50.6	101	50	50.4	101	0	70-126/11
100-41-4	Ethylbenzene	ND		50	49.5	99	50	49.7	99	0	51-140/20
75-09-2	Methylene chloride	ND		50	49.7	99	50	48.4	97	3	73-125/13
127-18-4	Tetrachloroethene	ND		50	52.3	105	50	52.3	105	0	61-139/11
108-88-3	Toluene	ND		50	49.1	98	50	50.0	100	2	60-135/10
71-55-6	1,1,1-Trichloroethane	0.47	J	50	54.9	109	50	54.9	109	0	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	47.6	95	50	48.8	98	2	78-121/11
79-01-6	Trichloroethene	ND		50	51.8	104	50	52.0	104	0	62-141/10
75-01-4	Vinyl chloride	ND		50	50.9	102	50	52.2	104	3	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JC65632-13 Limits
1868-53-7	Dibromofluoromethane	107%	105%	109% 80-120%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	109% 81-124%
2037-26-5	Toluene-D8	99%	100%	98% 80-120%
460-00-4	4-Bromofluorobenzene	101%	104%	100% 80-120%

* = Outside of Control Limits.

6.4.1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC65633-9MS	A241549.D	1	05/10/18	OI	n/a	n/a	VA9204
JC65633-9MSD	A241550.D	1	05/10/18	OI	n/a	n/a	VA9204
JC65633-9	A241499.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18, JC65632-19

CAS No.	Compound	JC65633-9		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	0.72	J	50	42.1	83	50	43.6	86	4	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	42.2	84	50	43.7	87	3	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	48.1	96	50	49.0	98	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	45.9	92	50	47.1	94	3	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	47.1	94	50	47.5	95	1	70-126/11
100-41-4	Ethylbenzene	ND		50	48.9	98	50	49.5	99	1	51-140/20
75-09-2	Methylene chloride	ND		50	44.8	90	50	46.1	92	3	73-125/13
127-18-4	Tetrachloroethene	1.1		50	50.2	98	50	51.2	100	2	61-139/11
108-88-3	Toluene	ND		50	43.5	87	50	44.6	89	2	60-135/10
71-55-6	1,1,1-Trichloroethane	0.54	J	50	52.0	103	50	53.0	105	2	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	43.5	87	50	43.9	88	1	78-121/11
79-01-6	Trichloroethene	ND		50	48.5	97	50	49.5	99	2	62-141/10
75-01-4	Vinyl chloride	ND		50	57.2	114	50	55.9	112	2	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JC65633-9	Limits
1868-53-7	Dibromofluoromethane	100%	102%	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	96%	96%	81-124%
2037-26-5	Toluene-D8	94%	94%	91%	80-120%
460-00-4	4-Bromofluorobenzene	96%	97%	91%	80-120%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC65733-2DUP	2V50468.D	1	05/09/18	JP	n/a	n/a	V2V2014
JC65733-2	2V50462.D	1	05/09/18	JP	n/a	n/a	V2V2014

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65632-17, JC65632-18

CAS No.	Compound	JC65733-2		DUP	Q	RPD	Limits
		ug/l	Q	ug/l			
75-01-4	Vinyl chloride	0.90	J	1.1		20	20
CAS No. Surrogate Recoveries							
Surrogate Recoveries		DUP		JC65733-2		Limits	
1868-53-7	Dibromofluoromethane	108%		107%		80-120%	
17060-07-0	1,2-Dichloroethane-D4	118%		119%		81-124%	
2037-26-5	Toluene-D8	108%		108%		80-120%	
460-00-4	4-Bromofluorobenzene	105%		96%		80-120%	

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2V1992-BFB
Lab File ID: 2V49935.D
Instrument ID: GCMS2V

Injection Date: 04/20/18
Injection Time: 21:15

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	28419	19.6	Pass
75	30.0 - 60.0% of mass 95	69003	47.6	Pass
95	Base peak, 100% relative abundance	145059	100.0	Pass
96	5.0 - 9.0% of mass 95	9905	6.83	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	109355	75.4	Pass
175	5.0 - 9.0% of mass 174	8677	5.98	(7.93) ^a Pass
176	95.0 - 101.0% of mass 174	104872	72.3	(95.9) ^a Pass
177	5.0 - 9.0% of mass 176	6929	4.78	(6.61) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V1992-IC1992	2V49936.D	04/20/18	21:44	00:29	Initial cal 0.5
V2V1992-IC1992	2V49937.D	04/20/18	22:10	00:55	Initial cal 1
V2V1992-IC1992	2V49938.D	04/20/18	22:35	01:20	Initial cal 2
V2V1992-IC1992	2V49939.D	04/20/18	23:01	01:46	Initial cal 5
V2V1992-IC1992	2V49940.D	04/20/18	23:26	02:11	Initial cal 10
V2V1992-IC1992	2V49941.D	04/20/18	23:51	02:36	Initial cal 20
V2V1992-ICC1992	2V49942.D	04/21/18	00:17	03:02	Initial cal 50
V2V1992-IC1992	2V49943.D	04/21/18	00:42	03:27	Initial cal 100
V2V1992-IC1992	2V49944.D	04/21/18	01:08	03:53	Initial cal 200
V2V1992-ICV1992	2V49947.D	04/21/18	02:24	05:09	Initial cal verification 50
V2V1992-ICV1992	2V49948.D	04/21/18	02:50	05:35	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2V1992-BFB2	Injection Date: 04/23/18
Lab File ID: 2V49951.D	Injection Time: 08:45
Instrument ID: GCMS2V	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	29075	18.4	Pass
75	30.0 - 60.0% of mass 95	73819	46.8	Pass
95	Base peak, 100% relative abundance	157696	100.0	Pass
96	5.0 - 9.0% of mass 95	10395	6.59	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	118291	75.0	Pass
175	5.0 - 9.0% of mass 174	9358	5.93	(7.91) ^a Pass
176	95.0 - 101.0% of mass 174	116291	73.7	(98.3) ^a Pass
177	5.0 - 9.0% of mass 176	7485	4.75	(6.44) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V1992-ICV1992	2V49952.D	04/23/18	09:14	00:29	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V2V2014-BFB	Injection Date:	05/09/18
Lab File ID:	2V50455.D	Injection Time:	09:48
Instrument ID:	GCMS2V		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	27696	22.9	Pass
75	30.0 - 60.0% of mass 95	60427	50.0	Pass
95	Base peak, 100% relative abundance	120843	100.0	Pass
96	5.0 - 9.0% of mass 95	7813	6.47	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	96483	79.8	Pass
175	5.0 - 9.0% of mass 174	7647	6.33	(7.93) ^a Pass
176	95.0 - 101.0% of mass 174	92584	76.6	(96.0) ^a Pass
177	5.0 - 9.0% of mass 176	6046	5.00	(6.53) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V2014-CC1992	2V50456.D	05/09/18	10:22	00:34	Continuing cal 20
V2V2014-BS	2V50458.D	05/09/18	11:41	01:53	Blank Spike
V2V2014-MB	2V50460.D	05/09/18	12:50	03:02	Method Blank
JC65733-1	2V50461.D	05/09/18	13:25	03:37	(used for QC only; not part of job JC65632)
JC65733-2	2V50462.D	05/09/18	13:51	04:03	(used for QC only; not part of job JC65632)
ZZZZZZ	2V50463.D	05/09/18	14:16	04:28	(unrelated sample)
JC65719-5	2V50464.D	05/09/18	14:42	04:54	(used for QC only; not part of job JC65632)
ZZZZZZ	2V50465.D	05/09/18	15:07	05:19	(unrelated sample)
JC65733-2DUP	2V50468.D	05/09/18	16:24	06:36	Duplicate
JC65632-18	2V50469.D	05/09/18	16:50	07:02	HSSER-SMW04-050318
JC65632-17	2V50470.D	05/09/18	17:16	07:28	HSSER-PMW02-050318
ZZZZZZ	2V50471.D	05/09/18	17:42	07:54	(unrelated sample)
ZZZZZZ	2V50472.D	05/09/18	18:07	08:19	(unrelated sample)
ZZZZZZ	2V50473.D	05/09/18	18:33	08:45	(unrelated sample)
ZZZZZZ	2V50474.D	05/09/18	18:58	09:10	(unrelated sample)
ZZZZZZ	2V50475.D	05/09/18	19:24	09:36	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2V2015-BFB
Lab File ID: 2V50477.D
Instrument ID: GCMS2V

Injection Date: 05/10/18
Injection Time: 06:26

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	27829	23.6	Pass
75	30.0 - 60.0% of mass 95	60847	51.6	Pass
95	Base peak, 100% relative abundance	117877	100.0	Pass
96	5.0 - 9.0% of mass 95	8035	6.82	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	88149	74.8	Pass
175	5.0 - 9.0% of mass 174	7165	6.08	(8.13) ^a Pass
176	95.0 - 101.0% of mass 174	85640	72.7	(97.2) ^a Pass
177	5.0 - 9.0% of mass 176	5995	5.09	(7.00) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2V2015-CC1992	2V50477.D	05/10/18	06:26	00:00	Continuing cal 20
V2V2014-BS2	2V50478.D	05/10/18	07:06	00:40	Blank Spike
V2V2014-MB2	2V50480.D	05/10/18	08:05	01:39	Method Blank
JC65719-5MS	2V50481.D	05/10/18	08:43	02:17	Matrix Spike
V2V2015-BS	2V50482.D	05/10/18	09:17	02:51	Blank Spike
V2V2015-MB	2V50484.D	05/10/18	10:15	03:49	Method Blank
GP12924-LB4	2V50485.D	05/10/18	10:51	04:25	Leachate Blank
ZZZZZZ	2V50486.D	05/10/18	11:33	05:07	(unrelated sample)
GP12870-LB2	2V50488.D	05/10/18	12:36	06:10	Leachate Blank
ZZZZZZ	2V50489.D	05/10/18	13:06	06:40	(unrelated sample)
ZZZZZZ	2V50490.D	05/10/18	13:32	07:06	(unrelated sample)
ZZZZZZ	2V50491.D	05/10/18	13:58	07:32	(unrelated sample)
JC65676-1	2V50493.D	05/10/18	14:50	08:24	(used for QC only; not part of job JC65632)
JC65676-1MS	2V50494.D	05/10/18	15:16	08:50	Matrix Spike
GP12924-LS3	2V50494A.D	05/10/18	15:16	08:50	Leachate Spike
JC65676-1MSD	2V50495.D	05/10/18	15:42	09:16	Matrix Spike Duplicate
ZZZZZZ	2V50497.D	05/10/18	16:33	10:07	(unrelated sample)
ZZZZZZ	2V50498.D	05/10/18	16:59	10:33	(unrelated sample)
ZZZZZZ	2V50499.D	05/10/18	17:25	10:59	(unrelated sample)
ZZZZZZ	2V50500.D	05/10/18	17:51	11:25	(unrelated sample)
ZZZZZZ	2V50501.D	05/10/18	18:17	11:51	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	V4B3370-BFB	Injection Date:	04/25/18
Lab File ID:	4B81321.D	Injection Time:	15:08
Instrument ID:	GCMS4B		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16281	17.9	Pass
75	30.0 - 60.0% of mass 95	41533	45.8	Pass
95	Base peak, 100% relative abundance	90725	100.0	Pass
96	5.0 - 9.0% of mass 95	6121	6.75	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 150.0% of mass 95	86293	95.1	Pass
175	5.0 - 9.0% of mass 174	6714	7.40	(7.78) ^a Pass
176	95.0 - 101.0% of mass 174	84002	92.6	(97.3) ^a Pass
177	5.0 - 9.0% of mass 176	5433	5.99	(6.47) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B3370-IC3370	4B81323.D	04/25/18	16:54	01:46	Initial cal 0.5
V4B3370-IC3370	4B81324.D	04/25/18	17:22	02:14	Initial cal 1
V4B3370-IC3370	4B81325.D	04/25/18	17:50	02:42	Initial cal 2
V4B3370-IC3370	4B81326.D	04/25/18	18:18	03:10	Initial cal 5
V4B3370-IC3370	4B81327.D	04/25/18	18:46	03:38	Initial cal 10
V4B3370-IC3370	4B81328.D	04/25/18	19:14	04:06	Initial cal 20
V4B3370-ICC3370	4B81329.D	04/25/18	19:42	04:34	Initial cal 50
V4B3370-IC3370	4B81330.D	04/25/18	20:10	05:02	Initial cal 100
V4B3370-IC3370	4B81331.D	04/25/18	20:38	05:30	Initial cal 200
V4B3370-ICV3370	4B81334.D	04/25/18	22:03	06:55	Initial cal verification 50
V4B3370-ICV3370	4B81335.D	04/25/18	22:31	07:23	Initial cal verification 50
ZZZZZZ	4B81337.D	04/25/18	23:27	08:19	(unrelated sample)
ZZZZZZ	4B81338.D	04/25/18	23:56	08:48	(unrelated sample)
ZZZZZZ	4B81339.D	04/26/18	00:24	09:16	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V4B3388-BFB
Lab File ID: 4B81664.D
Instrument ID: GCMS4B

Injection Date: 05/08/18
Injection Time: 19:05

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	15918	18.3	Pass
75	30.0 - 60.0% of mass 95	40112	46.2	Pass
95	Base peak, 100% relative abundance	86885	100.0	Pass
96	5.0 - 9.0% of mass 95	5816	6.69	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 150.0% of mass 95	84853	97.7	Pass
175	5.0 - 9.0% of mass 174	6977	8.03	(8.22) ^a Pass
176	95.0 - 101.0% of mass 174	83624	96.2	(98.6) ^a Pass
177	5.0 - 9.0% of mass 176	5539	6.38	(6.62) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V4B3388-CC3370	4B81664.D	05/08/18	19:05	00:00	Continuing cal 50
V4B3388-BS	4B81666.D	05/08/18	20:01	00:56	Blank Spike
V4B3388-MB	4B81668.D	05/08/18	20:57	01:52	Method Blank
JC65632-13	4B81669.D	05/08/18	21:25	02:20	HSSER-GMZ02-050218
JC65632-13MS	4B81670.D	05/08/18	21:53	02:48	Matrix Spike
JC65632-13MSD	4B81671.D	05/08/18	22:21	03:16	Matrix Spike Duplicate
JC65632-1	4B81673.D	05/08/18	23:17	04:12	HSSER-FBLK01-050118
JC65632-2	4B81674.D	05/08/18	23:45	04:40	HSSER-SMW08-050118
JC65632-3	4B81675.D	05/09/18	00:13	05:08	HSSER-MW07FGA-050118
JC65632-4	4B81676.D	05/09/18	00:41	05:36	HSSER-GMZ01-050118
JC65632-5	4B81677.D	05/09/18	01:09	06:04	HSSER-SMW02-050118
JC65632-6	4B81678.D	05/09/18	01:37	06:32	HSSER-SMW01-050118
JC65632-7	4B81679.D	05/09/18	02:05	07:00	HSSER-MW203-051118
JC65632-8	4B81680.D	05/09/18	02:33	07:28	HSSER-SMW19-050218
JC65632-9	4B81681.D	05/09/18	03:01	07:56	HSSER-GMZ04-050218
JC65632-10	4B81682.D	05/09/18	03:29	08:24	HSSER-SMW21-050218
JC65632-11	4B81683.D	05/09/18	03:57	08:52	HSSER-SMW20-050218
JC65632-12	4B81684.D	05/09/18	04:25	09:20	HSSER-GMZ03-050218
JC65632-14	4B81685.D	05/09/18	04:53	09:48	HSSER-DUP01-050218
JC65632-15	4B81686.D	05/09/18	05:21	10:16	HSSER-PMW01-050318
JC65632-16	4B81687.D	05/09/18	05:49	10:44	HSSER-EBLK01-050318

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9165-BFB	Injection Date:	04/03/18
Lab File ID:	A240801.D	Injection Time:	17:23
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	10680	17.4	Pass
75	30.0 - 60.0% of mass 95	27821	45.2	Pass
95	Base peak, 100% relative abundance	61501	100.0	Pass
96	5.0 - 9.0% of mass 95	4068	6.61	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	51685	84.0	Pass
175	5.0 - 9.0% of mass 174	4265	6.93	(8.25) ^a Pass
176	95.0 - 101.0% of mass 174	50666	82.4	(98.0) ^a Pass
177	5.0 - 9.0% of mass 176	3509	5.71	(6.93) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9165-IC9165	A240802.D	04/03/18	17:52	00:29	Initial cal 0.2
VA9165-IC9165	A240803.D	04/03/18	18:21	00:58	Initial cal 0.5
VA9165-IC9165	A240804.D	04/03/18	18:50	01:27	Initial cal 1
VA9165-IC9165	A240805.D	04/03/18	19:19	01:56	Initial cal 2
VA9165-IC9165	A240806.D	04/03/18	19:48	02:25	Initial cal 5
VA9165-IC9165	A240807.D	04/03/18	20:17	02:54	Initial cal 10
VA9165-IC9165	A240808.D	04/03/18	20:46	03:23	Initial cal 20
VA9165-ICC9165	A240809.D	04/03/18	21:15	03:52	Initial cal 50
VA9165-IC9165	A240810.D	04/03/18	21:44	04:21	Initial cal 100
VA9165-IC9165	A240811.D	04/03/18	22:13	04:50	Initial cal 200
VA9165-ICV9165	A240814.D	04/03/18	23:40	06:17	Initial cal verification 50
VA9165-ICV9165	A240815.D	04/04/18	00:09	06:46	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9204-BFB	Injection Date:	05/08/18
Lab File ID:	A241495.D	Injection Time:	06:46
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	13507	15.9	Pass
75	30.0 - 60.0% of mass 95	37472	44.0	Pass
95	Base peak, 100% relative abundance	85083	100.0	Pass
96	5.0 - 9.0% of mass 95	5590	6.57	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	77392	91.0	Pass
175	5.0 - 9.0% of mass 174	6183	7.27	(7.99) ^a Pass
176	95.0 - 101.0% of mass 174	75331	88.5	(97.3) ^a Pass
177	5.0 - 9.0% of mass 176	4926	5.79	(6.54) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9204-CC9165	A241495.D	05/08/18	06:46	00:00	Continuing cal 20
VA9204-BS	A241496.D	05/08/18	07:50	01:04	Blank Spike
VA9204-MB	A241498.D	05/08/18	09:08	02:22	Method Blank
JC65633-9	A241499.D	05/08/18	09:56	03:10	(used for QC only; not part of job JC65632)
ZZZZZZ	A241503.D	05/08/18	11:58	05:12	(unrelated sample)
ZZZZZZ	A241504.D	05/08/18	12:27	05:41	(unrelated sample)
ZZZZZZ	A241505.D	05/08/18	12:56	06:10	(unrelated sample)
ZZZZZZ	A241506.D	05/08/18	13:25	06:39	(unrelated sample)
ZZZZZZ	A241507.D	05/08/18	13:54	07:08	(unrelated sample)
ZZZZZZ	A241508.D	05/08/18	14:23	07:37	(unrelated sample)
ZZZZZZ	A241509.D	05/08/18	14:52	08:06	(unrelated sample)
ZZZZZZ	A241510.D	05/08/18	15:21	08:35	(unrelated sample)
ZZZZZZ	A241511.D	05/08/18	15:51	09:05	(unrelated sample)
ZZZZZZ	A241512.D	05/08/18	16:20	09:34	(unrelated sample)
ZZZZZZ	A241513.D	05/08/18	16:49	10:03	(unrelated sample)
JC65632-17	A241514.D	05/08/18	17:18	10:32	HSSER-PMW02-050318
JC65632-18	A241515.D	05/08/18	17:47	11:01	HSSER-SMW04-050318
JC65632-19	A241516.D	05/08/18	18:17	11:31	HSSER-TRIP01-050118

Instrument Performance Check (BFB)

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9206-BFB	Injection Date:	05/10/18
Lab File ID:	A241544.D	Injection Time:	08:31
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	8686	17.1	Pass
75	30.0 - 60.0% of mass 95	22573	44.5	Pass
95	Base peak, 100% relative abundance	50707	100.0	Pass
96	5.0 - 9.0% of mass 95	3456	6.82	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	45787	90.3	Pass
175	5.0 - 9.0% of mass 174	3648	7.19	(7.97) ^a Pass
176	95.0 - 101.0% of mass 174	45072	88.9	(98.4) ^a Pass
177	5.0 - 9.0% of mass 176	2908	5.73	(6.45) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9206-CC9165	A241545.D	05/10/18	09:12	00:41	Continuing cal 20
VA9206-BS	A241546.D	05/10/18	09:55	01:24	Blank Spike
VA9204-BS2	A241546.D	05/10/18	09:55	01:24	Blank Spike
VA9206-MB	A241548.D	05/10/18	10:54	02:23	Method Blank
VA9204-MB2	A241548.D	05/10/18	10:54	02:23	Method Blank
JC65633-9MS	A241549.D	05/10/18	11:30	02:59	Matrix Spike
JC65633-9MSD	A241550.D	05/10/18	11:59	03:28	Matrix Spike Duplicate
ZZZZZZ	A241552.D	05/10/18	12:57	04:26	(unrelated sample)

Internal Standard Area Summary

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Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2V2014-CC1992	Injection Date:	05/09/18
Lab File ID:	2V50456.D	Injection Time:	10:22
Instrument ID:	GCMS2V	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	270066	2.27	334272	3.36	507892	3.88
Upper Limit ^a	540132	2.77	668544	3.86	1015784	4.38
Lower Limit ^b	135033	1.77	167136	2.86	253946	3.38

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
V2V2014-BS	267847	2.27	348705	3.36	503924	3.88
V2V2014-MB	281486	2.27	363839	3.36	530740	3.88
JC65733-1	262622	2.26	349685	3.36	509060	3.88
JC65733-2	287807	2.27	412828	3.36	577767	3.88
ZZZZZZ	245902	2.27	277242	3.36	463021	3.88
JC65719-5	247980	2.27	291755	3.36	485787	3.88
ZZZZZZ	237138	2.27	319638	3.36	428037	3.88
JC65733-2DUP	265864	2.27	341069	3.36	507184	3.88
JC65632-18	245722	2.27	283275	3.36	472351	3.88
JC65632-17	240525	2.27	328934	3.36	478773	3.88
ZZZZZZ	247740	2.27	324182	3.36	476949	3.88
ZZZZZZ	233182	2.27	266947	3.36	452164	3.88
ZZZZZZ	243530	2.27	271788	3.36	464840	3.88
ZZZZZZ	208079	2.27	294785	3.36	439897	3.88
ZZZZZZ	224187	2.26	306558	3.36	453813	3.88

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V2V2015-CC1992	Injection Date:	05/10/18
Lab File ID:	2V50477.D	Injection Time:	06:26
Instrument ID:	GCMS2V	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	240709	2.27	325821	3.36	481897	3.88
Upper Limit ^a	481418	2.77	651642	3.86	963794	4.38
Lower Limit ^b	120355	1.77	162911	2.86	240949	3.38

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
V2V2014-BS2	240571	2.27	327803	3.36	486416	3.88
V2V2014-MB2	259996	2.27	322928	3.36	470367	3.88
JC65719-5MS	269010	2.27	351109	3.36	499675	3.88
V2V2015-BS	283340	2.27	377317	3.36	559945	3.88
V2V2015-MB	296017	2.27	368752	3.36	529584	3.88
GP12924-LB4	262497	2.27	352316	3.36	529152	3.88
ZZZZZZ	245446	2.27	340375	3.36	486677	3.88
GP12870-LB2	314430	2.27	408400	3.36	627427	3.88
ZZZZZZ	239241	2.27	334384	3.36	484039	3.88
ZZZZZZ	240957	2.27	271139	3.36	452685	3.88
ZZZZZZ	256485	2.27	291635	3.36	489814	3.88
JC65676-1	264154	2.27	329103	3.36	459968	3.88
JC65676-1MS	282835	2.27	347350	3.36	502818	3.88
GP12924-LS3	282835	2.27	347350	3.36	502818	3.88
JC65676-1MSD	317858	2.27	379888	3.36	528271	3.88
ZZZZZZ	290903	2.27	328905	3.36	548780	3.88
ZZZZZZ	269380	2.27	322270	3.36	483287	3.88
ZZZZZZ	265553	2.27	300162	3.36	499666	3.88
ZZZZZZ	260812	2.27	333315	3.36	495306	3.88
ZZZZZZ	261854	2.27	333990	3.36	499764	3.88

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	V4B3388-CC3370	Injection Date:	05/08/18
Lab File ID:	4B81664.D	Injection Time:	19:05
Instrument ID:	GCMS4B	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	RT	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	RT
Check Std	123892	6.79	233577	8.77	310293	9.64	308946	12.83	201762	15.40		
Upper Limit ^a	247784	7.29	467154	9.27	620586	10.14	617892	13.33	403524	15.90		
Lower Limit ^b	61946	6.29	116789	8.27	155147	9.14	154473	12.33	100881	14.90		

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	RT	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	RT
V4B3388-BS	123545	6.79	233560	8.77	307358	9.64	311206	12.83	202452	15.40		
V4B3388-MB	146345	6.79	222940	8.77	290426	9.64	290864	12.83	185476	15.40		
JC65632-13	122148	6.79	220296	8.77	293943	9.64	295345	12.83	187367	15.40		
JC65632-13MS	131550	6.80	235161	8.77	313781	9.64	315339	12.83	206261	15.40		
JC65632-13MSD	140911	6.77	237798	8.77	318433	9.64	314072	12.83	199685	15.40		
JC65632-1	136780	6.79	222990	8.77	297355	9.65	299695	12.83	196015	15.40		
JC65632-2	137528	6.78	223489	8.77	295559	9.65	297476	12.83	194804	15.40		
JC65632-3	139162	6.78	233922	8.77	317450	9.65	313991	12.83	197510	15.40		
JC65632-4	134939	6.79	218717	8.77	298529	9.64	294521	12.83	190554	15.40		
JC65632-5	138713	6.79	228860	8.77	313417	9.65	308792	12.83	198661	15.40		
JC65632-6	127255	6.79	213464	8.77	289287	9.65	286877	12.83	184349	15.40		
JC65632-7	119671	6.77	219407	8.77	301849	9.65	296528	12.83	188846	15.40		
JC65632-8	129562	6.79	216933	8.77	300384	9.65	293956	12.83	185382	15.40		
JC65632-9	121727	6.78	214305	8.77	293568	9.64	289693	12.83	188901	15.40		
JC65632-10	120580	6.76	223251	8.77	309775	9.65	295500	12.83	187077	15.40		
JC65632-11	121362	6.77	221348	8.77	305027	9.65	299790	12.83	191908	15.40		
JC65632-12	117743	6.79	209395	8.77	285488	9.64	286076	12.83	188299	15.40		
JC65632-14	126775	6.78	206050	8.77	282054	9.64	283250	12.83	181183	15.40		
JC65632-15	124421	6.79	216668	8.77	299876	9.65	296913	12.83	193198	15.40		
JC65632-16	132555	6.78	220195	8.77	307700	9.65	303141	12.83	189906	15.40		

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	VA9204-CC9165	Injection Date:	05/08/18
Lab File ID:	A241495.D	Injection Time:	06:46
Instrument ID:	GCMSA	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	411626	7.80	259385	10.17	381142	11.11	347164	14.51	204541	17.11
Upper Limit ^a	823252	8.30	518770	10.67	762284	11.61	694328	15.01	409082	17.61
Lower Limit ^b	205813	7.30	129693	9.67	190571	10.61	173582	14.01	102271	16.61

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9204-BS	431368	7.79	268335	10.17	394996	11.11	359810	14.51	205198	17.11
VA9204-MB	413671	7.79	260614	10.17	373923	11.10	337927	14.50	207897	17.11
JC65633-9	394717	7.79	258780	10.17	361606	11.11	324190	14.50	200329	17.11
ZZZZZZ	407890	7.80	267767	10.17	383178	11.11	339630	14.51	211970	17.11
ZZZZZZ	403787	7.80	262041	10.17	366028	11.11	327864	14.51	210425	17.11
ZZZZZZ	405540	7.80	255977	10.17	355635	11.11	324121	14.51	204863	17.11
ZZZZZZ	420832	7.80	258278	10.17	370389	11.11	333731	14.51	210299	17.11
ZZZZZZ	389089	7.79	244717	10.17	356947	11.11	332332	14.51	204905	17.11
ZZZZZZ	413269	7.80	253957	10.17	364636	11.11	334781	14.50	206751	17.11
ZZZZZZ	386122	7.80	248780	10.17	364963	11.11	326629	14.51	200896	17.11
ZZZZZZ	373223	7.79	248540	10.17	352474	11.10	325700	14.51	195691	17.11
ZZZZZZ	402737	7.79	249350	10.17	364075	11.11	323340	14.51	202382	17.11
ZZZZZZ	391664	7.80	242345	10.17	353189	11.11	316570	14.51	195549	17.11
ZZZZZZ	393784	7.79	247986	10.17	354487	11.11	323543	14.51	200843	17.11
JC65632-17	370849	7.79	245746	10.17	353902	11.11	326344	14.51	204213	17.11
JC65632-18	391322	7.79	244234	10.17	359234	11.10	325271	14.51	198432	17.11
JC65632-19	384305	7.79	240225	10.17	347411	11.10	316387	14.51	199306	17.11

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

6.7.4
6

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	VA9206-CC9165	Injection Date:	05/10/18
Lab File ID:	A241545.D	Injection Time:	09:12
Instrument ID:	GCMSA	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	257309	7.80	164708	10.17	243533	11.11
Upper Limit ^a	514618	8.30	329416	10.67	487066	11.61
Lower Limit ^b	128655	7.30	82354	9.67	121767	10.61

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
VA9206-BS	270002	7.80	176252	10.17	265027	11.11
VA9204-BS2	270002	7.80	176252	10.17	265027	11.11
VA9206-MB	265895	7.80	171793	10.17	243770	11.11
VA9204-MB2	265895	7.80	171793	10.17	243770	11.11
JC65633-9MS	252948	7.81	182681	10.17	274352	11.11
JC65633-9MSD	247323	7.80	183052	10.17	275053	11.11
ZZZZZZ	254044	7.79	181048	10.17	256835	11.11

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Page 1 of 2

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC65632-1	4B81673.D	108	109	98	99
JC65632-2	4B81674.D	108	110	98	100
JC65632-3	4B81675.D	109	109	97	101
JC65632-4	4B81676.D	111	111	99	100
JC65632-5	4B81677.D	111	110	99	101
JC65632-6	4B81678.D	110	111	99	99
JC65632-7	4B81679.D	113	111	100	101
JC65632-8	4B81680.D	111	110	98	100
JC65632-9	4B81681.D	111	111	99	99
JC65632-10	4B81682.D	114	112	99	100
JC65632-11	4B81683.D	114	113	99	99
JC65632-12	4B81684.D	112	112	99	98
JC65632-13	4B81669.D	109	109	98	100
JC65632-14	4B81685.D	114	115	98	100
JC65632-15	4B81686.D	115	112	98	101
JC65632-16	4B81687.D	116	115	98	102
JC65632-17	2V50470.D	105	113	104	105
JC65632-17	A241514.D	99	97	89	91
JC65632-18	2V50469.D	114	120	114	106
JC65632-18	A241515.D	100	95	91	92
JC65632-19	A241516.D	100	98	91	92
JC65632-13MS	4B81670.D	107	103	99	101
JC65632-13MSD	4B81671.D	105	102	100	104
JC65633-9MS	A241549.D	100	94	94	96
JC65633-9MSD	A241550.D	102	96	94	97
JC65719-5MS	2V50481.D	107	121	102	101
JC65733-2DUP	2V50468.D	108	118	108	105
V2V2014-BS	2V50458.D	107	117	106	100
V2V2014-MB	2V50460.D	107	118	108	107
V4B3388-BS	4B81666.D	105	104	98	104
V4B3388-MB	4B81668.D	107	110	99	100
VA9204-BS	A241496.D	99	94	91	96
VA9204-MB	A241498.D	98	95	90	93
V2V2014-MB2	2V50480.D	105	121	103	106
VA9204-MB2	A241548.D	101	99	92	93

Surrogate
Compounds

Recovery
Limits

S1 = Dibromofluoromethane

80-120%

6.8.1
6

Surrogate Recovery Summary

Page 2 of 2

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Surrogate Compounds	Recovery Limits
---------------------	-----------------

S2 = 1,2-Dichloroethane-D4

81-124%

S3 = Toluene-D8

80-120%

S4 = 4-Bromofluorobenzene

80-120%

6.8.1
6

Initial Calibration Summary

Page 1 of 5

Job Number: JC65632

Sample: V2V1992-ICC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49942.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report MS2V

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
Last Update : Mon Apr 23 10:50:09 2018
Response via : Initial Calibration

Calibration Files

10 =2V49940.D	0.5 =2V49936.D	5 =2V49939.D	50 =2V49942.D
100 =2V49943.D	1 =2V49937.D	200 =2V49944.D	20 =2V49941.D
2 =2V49938.D	=		

Compound

	10	0.5	5	50	100	1	200	20	2	Avg	%RSD
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1) I Tert Butyl Alcohol-d9	-----ISTD-----										
2) ethanol	0.165	0.176	0.161	0.153	0.136	0.168	0.159	0.171	0.161	7.73	
3) tertiary butyl alcohol	1.442	1.627	1.466	1.391	1.347	1.477	1.359	1.414	1.509	1.448	5.95
4) 1,4-dioxane	0.140		0.136	0.134	0.126	0.153	0.123	0.132	0.148	0.137	7.53
5) I pentafluorobenzene	-----ISTD-----										
6) chlorodifluoromethane	0.814	0.879	0.785	0.765	0.729	0.828	0.682	0.801	0.829	0.790	7.43
7) dichlorodifluoromethane	0.992	0.976	0.964	0.951	0.947	1.020	0.874	0.997	0.987	0.967	4.35
8) freon 114										0.000	-1.00
9) freon 142b										0.000	-1.00
10) chloromethane	1.043		1.041	1.036	1.005	1.159	0.910	1.068	1.113	1.047	7.04
11) vinyl chloride	0.871	0.938	0.825	0.835	0.820	0.916	0.804	0.868	0.909	0.865	5.51
12) bromomethane	0.352		0.372	0.272	0.200		0.338	0.423	0.326	24.16	
	----- Quadratic regression -----										
										Coefficient = 0.9997	
										Response Ratio = 0.00486 + 0.34213 *A + -0.07233 *A^2	

13) chloroethane	0.348	0.363	0.306	0.266	0.417	0.345	0.404	0.350	15.01		
14) trichlorofluoromethane	1.094	1.087	1.058	1.048	1.050	1.141	1.006	1.105	1.137	1.081	4.09
15) vinyl bromide	0.577	0.650	0.561	0.559	0.557	0.618	0.490	0.580	0.590	0.576	7.72
16) 1,3-butadiene										0.000	-1.00
17) ethyl ether	0.315	0.309	0.300	0.302	0.297	0.341	0.296	0.306	0.323	0.310	4.73
18) 2-chloropropane	0.926	0.944	0.916	0.866	0.863	0.996	0.810	0.918	0.959	0.911	6.19
19) acrolein	0.183	0.204	0.167	0.172	0.165	0.201	0.169	0.179	0.190	0.181	8.07
20) freon 113	0.396	0.403	0.382	0.354	0.369	0.356	0.357	0.384	0.384	0.376	4.80
21) 1,1-dichloroethene	0.990	0.996	0.984	0.948	0.943	0.963	0.915	0.994	0.997	0.970	3.02

6.9
6

Initial Calibration Summary

Page 2 of 5

Job Number: JC65632

Sample: V2V1992-ICC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49942.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

22)	acetone	0.074	0.081	0.072	0.073	0.066	0.083	0.067	0.075	0.074	0.074	7.58
23)	acetonitrile	0.119	0.136	0.113	0.113	0.104	0.131	0.106	0.119	0.121	0.118	9.00
24)	iodomethane	0.272		0.244	0.352	0.431		0.470	0.295	0.247	0.330	27.39
		-----	Quadratic regression	-----					Coefficient =		0.9992	
												Response Ratio = -0.02172 + 0.37944 *A + 0.02435 *A^2
25)	carbon disulfide	1.483	1.811	1.478	1.401	1.393	1.542	1.363	1.482	1.494	1.494	8.84
26)	methylene chloride	0.648	0.780	0.652	0.611	0.602	0.698	0.593	0.646	0.718	0.661	9.25
27)	methyl acetate	0.664	0.708	0.642	0.626	0.589	0.692	0.602	0.651	0.675	0.650	6.10
28)	methyl tert butyl ether	1.845	1.955	1.790	1.786	1.769	1.888	1.737	1.832	1.794	1.822	3.68
29)	trans-1,2-dichloroethene	0.595	0.641	0.576	0.554	0.559	0.620	0.548	0.592	0.587	0.586	5.23
30)	hexane	0.378	0.345	0.352	0.345	0.357	0.330	0.352	0.371	0.365	0.355	4.17
31)	di-isopropyl ether	2.103	2.187	2.041	2.034	2.009	2.097	1.922	2.100	2.066	2.062	3.58
32)	ethyl tert-butyl ether	1.951	1.938	1.865	1.917	1.899	1.986	1.857	1.931	1.902	1.916	2.14
33)	1,1-dichloroethane	1.245	1.265	1.225	1.189	1.189	1.252	1.146	1.245	1.272	1.225	3.44
34)	chloroprene	0.898	0.904	0.864	0.884	0.888	0.837	0.859	0.914	0.888	0.882	2.76
35)	acrylonitrile	0.316	0.331	0.304	0.310	0.287	0.326	0.292	0.321	0.317	0.312	4.71
36)	vinyl acetate	0.099		0.095	0.097	0.095	0.086	0.098	0.099	0.088	0.095	5.29
37)	ethyl acetate	0.148		0.146	0.147	0.135	0.152	0.132	0.152	0.153	0.146	5.46
38)	2-butanone	0.098	0.103	0.095	0.097	0.089	0.096	0.091	0.097	0.094	0.095	4.33
39)	2,2-dichloropropane	0.855	0.867	0.851	0.832	0.831	0.871	0.796	0.845	0.888	0.849	3.17
40)	cis-1,2-dichloroethene	0.670	0.785	0.661	0.644	0.649	0.661	0.628	0.678	0.684	0.673	6.72
41)	propionitrile	0.152	0.152	0.147	0.148	0.133	0.152	0.134	0.152	0.155	0.147	5.41
42)	methyl acrylate	0.133		0.124	0.132	0.124	0.120	0.123	0.135	0.130	0.128	4.34
43)	bromochloromethane	0.313	0.294	0.297	0.307	0.303	0.278	0.279	0.314	0.312	0.300	4.60
44)	tetrahydrofuran	0.115		0.114	0.116	0.108	0.129	0.108	0.121	0.112	0.116	6.13
45)	chloroform	1.226	1.376	1.184	1.176	1.163	1.325	1.129	1.211	1.260	1.228	6.52
46)	dibromofluoromethane (s)	0.496	0.496	0.496	0.506	0.513	0.513	0.503	0.513	0.494	0.503	1.61
47)	methacrylonitrile	0.343	0.321	0.315	0.331	0.314	0.308	0.314	0.338	0.326	0.323	3.74
48)	1,1,1-trichloroethane	0.998	1.094	0.969	0.971	0.962	1.025	0.943	1.004	1.021	0.999	4.55
49)	cyclohexane	0.769	0.852	0.733	0.709	0.724	0.674	0.714	0.751	0.728	0.739	6.77
50)	1,1-dichloropropene											

6.9.1
6

Initial Calibration Summary

Page 3 of 5

Job Number: JC65632

Sample: V2V1992-ICC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49942.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	0.913	0.939	0.912	0.874	0.869	0.967	0.843	0.903	0.946	0.907	4.41
51)	carbon tetrachloride										
	0.830	0.857	0.804	0.786	0.778	0.826	0.745	0.814	0.818	0.806	4.06
52)	isobutyl alcohol										
	0.044	0.043	0.039	0.043	0.040	0.042	0.042	0.044	0.040	0.042	4.45
53)	tert-amyl alcohol										
	0.042	0.038	0.040	0.039	0.035	0.040	0.036	0.042	0.041	0.039	6.10
54)	I 1,4-difluorobenzene						-----ISTD-----				
55)	1,2-dichloroethane-d4 (s)										
	0.355	0.352	0.342	0.346	0.353	0.360	0.336	0.345	0.339	0.348	2.32
56)	n-butyl alcohol										
	0.019	0.017	0.018	0.020	0.018	0.017	0.019	0.020	0.017	0.019	6.73
57)	benzene										
	1.675	1.806	1.634	1.589	1.570	1.737	1.509	1.650	1.680	1.650	5.41
58)	tert-amyl methyl ether										
	1.259	1.312	1.191	1.224	1.199	1.227	1.160	1.244	1.217	1.226	3.55
59)	iso-octane										
	1.075	1.012	1.026	0.997	1.014	1.007	0.979	1.048	1.035	1.022	2.80
60)	heptane										
	0.224	0.212	0.213	0.206	0.211	0.204	0.208	0.214	0.215	0.212	2.80
61)	isopropyl acetate										
	0.085		0.081	0.085	0.080	0.088	0.080	0.088	0.086	0.084	4.01
62)	1,2-dichloroethane										
	0.634		0.626	0.602	0.581	0.757	0.561	0.626	0.668	0.632	9.56
63)	trichloroethene										
	0.447	0.479	0.437	0.432	0.426	0.484	0.420	0.444	0.465	0.448	5.10
64)	ethyl acrylate										
	0.699	0.667	0.642	0.703	0.664	0.670	0.665	0.709	0.637	0.673	3.84
65)	2-nitropropane										
	0.132		0.114	0.137	0.131	0.141	0.143	0.135	0.121	0.132	7.64
66)	2-chloroethyl vinyl ether										
	0.242		0.204	0.286	0.284		0.276	0.260	0.178	0.247	16.90
67)	methyl methacrylate										
	0.339	0.324	0.310	0.341	0.326	0.322	0.324	0.343	0.309	0.327	3.81
68)	1,2-dichloropropane										
	0.490	0.533	0.468	0.465	0.463	0.481	0.440	0.482	0.488	0.479	5.33
69)	methylcyclohexane										
	0.623	0.574	0.594	0.580	0.596	0.542	0.586	0.611	0.573	0.586	4.00
70)	dibromomethane										
	0.344	0.365	0.326	0.325	0.319	0.370	0.307	0.336	0.335	0.336	6.14
71)	bromodichloromethane										
	0.636	0.669	0.604	0.624	0.622	0.613	0.603	0.631	0.617	0.624	3.23
72)	epichlorohydrin										
	0.057	0.053	0.052	0.056	0.052	0.053	0.053	0.060	0.053	0.054	4.92
73)	cis-1,3-dichloropropene										
	0.715	0.729	0.674	0.715	0.715	0.695	0.683	0.724	0.674	0.703	3.03
74)	4-methyl-2-pentanone										
	0.237	0.216	0.220	0.235	0.216	0.216	0.216	0.239	0.222	0.224	4.51
75)	3-methyl-1-butanol										
	0.016		0.014	0.017	0.015		0.016	0.016	0.013	0.015	9.88
76)	I chlorobenzene-d5						-----ISTD-----				
77)	toluene-d8 (s)										
	1.307	1.300	1.296	1.277	1.276	1.285	1.259	1.297	1.327	1.292	1.54
78)	toluene										
	1.160	1.300	1.157	1.086	1.055	1.167	1.036	1.123	1.196	1.142	7.02
79)	ethyl methacrylate										
	0.690	0.634	0.648	0.701	0.675	0.612	0.673	0.704	0.633	0.663	4.95
80)	trans-1,3-dichloropropene										

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Initial Calibration Summary

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Job Number: JC65632

Sample: V2V1992-ICC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49942.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	0.769	0.719	0.726	0.761	0.754	0.730	0.743	0.766	0.729	0.744	2.55			
81)	1,1,2-trichloroethane			0.472	0.509	0.445	0.447	0.427	0.470	0.421	0.456	0.472	0.458	5.86
82)	2-hexanone			0.286	0.258	0.264	0.281	0.253	0.245	0.258	0.289	0.271	0.267	5.75
83)	tetrachloroethene			0.368	0.397	0.365	0.353	0.350	0.367	0.349	0.369	0.389	0.367	4.50
84)	1,3-dichloropropane			0.788	0.840	0.750	0.741	0.717	0.769	0.697	0.763	0.764	0.759	5.40
85)	butyl acetate			0.409	0.422	0.388	0.408	0.380	0.388	0.384	0.413	0.408	0.400	3.76
86)	dibromochloromethane			0.567	0.536	0.524	0.554	0.544	0.543	0.534	0.555	0.530	0.543	2.51
87)	1,2-dibromoethane			0.588	0.622	0.557	0.568	0.545	0.574	0.538	0.571	0.575	0.571	4.32
88)	n-butyl ether			2.090	1.989	1.996	2.032	1.964	1.934	1.863	2.070	1.980	1.991	3.48
89)	chlorobenzene			1.236	1.356	1.188	1.161	1.139	1.247	1.121	1.201	1.242	1.210	5.86
90)	1,1,1,2-tetrachloroethane			0.450	0.423	0.428	0.435	0.435	0.418	0.425	0.442	0.419	0.431	2.52
91)	ethylbenzene			2.151	2.219	2.084	2.079	2.039	2.038	1.958	2.129	2.166	2.096	3.78
92)	m,p-xylene			0.779	0.785	0.752	0.735	0.720	0.741	0.702	0.761	0.777	0.750	3.78
93)	o-xylene			1.696	1.658	1.614	1.620	1.583	1.632	1.561	1.658	1.624	1.627	2.50
94)	styrene			1.290	1.134	1.200	1.257	1.218	1.168	1.196	1.261	1.163	1.210	4.27
95)	butyl acrylate			0.495	0.429	0.449	0.529	0.513	0.407	0.518	0.513	0.436	0.476	9.65
96)	bromoform			0.366	0.334	0.334	0.383	0.374	0.329	0.387	0.372	0.342	0.358	6.48
97)	isopropylbenzene			1.880	1.877	1.830	1.840	1.808	1.791	1.796	1.891	1.866	1.842	2.07
98)	cis-1,4-dichloro-2-butene			0.207		0.182	0.235	0.229		0.245	0.224	0.173	0.213	12.85
99)	I 1,4-dichlorobenzene-d													ISTD-----
100)	4-bromofluorobenzene (s)			1.031	1.028	1.018	1.004	1.005	1.019	0.992	1.024	1.032	1.017	1.35
101)	bromobenzene			1.103	1.145	1.064	1.036	1.014	1.119	0.992	1.055	1.062	1.066	4.65
102)	1,1,2,2-tetrachloroethane			1.834	1.797	1.642	1.696	1.602	1.669	1.593	1.739	1.832	1.712	5.48
103)	trans-1,4-dichloro-2-butene			0.357	0.339	0.332	0.373	0.346	0.340	0.360	0.372	0.347	0.352	4.15
104)	1,2,3-trichloropropane			0.372	0.395	0.359	0.354	0.332	0.356	0.327	0.364	0.365	0.358	5.74
105)	n-propylbenzene			5.192	5.105	5.027	4.953	4.779	4.783	4.655	5.089	5.027	4.957	3.62
106)	2-chlorotoluene			1.013	0.960	0.976	0.938	0.906	0.899	0.895	0.958	1.021	0.952	4.91
107)	4-chlorotoluene			0.995	1.081	0.939	0.938	0.904	0.998	0.886	0.966	0.999	0.968	6.10
108)	4-ethyltoluene											0.000	-1.00	
109)	1,3,5-trimethylbenzene			3.279	3.170	3.084	3.185	3.100	2.961	3.057	3.225	3.170	3.137	3.06
110)	tert-butylbenzene													

Initial Calibration Summary

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Job Number: JC65632

Sample: V2V1992-ICC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49942.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

111)	1,2,4-trimethylbenzene	2.600	2.510	2.533	2.528	2.455	2.414	2.454	2.549	2.547	2.510	2.32
		3.380	4.754	3.289	3.197	3.120	3.649	3.087	3.276	3.449	3.467	14.79
112)	sec-butylbenzene	4.069	3.784	3.880	3.951	3.839	3.543	3.814	3.979	3.901	3.862	3.86
113)	1,3-dichlorobenzene	1.877	1.933	1.752	1.801	1.752	1.815	1.752	1.807	1.875	1.818	3.56
114)	p-isopropyltoluene	3.143	3.026	3.060	3.114	3.012	2.674	3.010	3.082	2.971	3.010	4.56
115)	1,4-dichlorobenzene	1.892	2.022	1.850	1.828	1.767	1.884	1.779	1.869	1.969	1.873	4.41
116)	1,2-dichlorobenzene	1.824	1.901	1.732	1.785	1.745	1.737	1.753	1.770	1.760	1.779	3.03
117)	1,4-diethylbenzene										0.000	-1.00
118)	n-butylbenzene	1.661	1.568	1.583	1.691	1.679	1.471	1.686	1.685	1.504	1.614	5.27
119)	1,2,4,5-tetramethylbenzene										0.000	-1.00
120)	1,2-dibromo-3-chloropropane	0.275		0.251	0.310	0.294	0.231	0.316	0.290	0.272	0.280	10.29
121)	1,3,5-trichlorobenzene	1.163	1.202	1.111	1.226	1.213	1.075	1.248	1.181	1.150	1.174	4.75
122)	1,2,4-trichlorobenzene	1.033	0.999	1.004	1.101	1.082	1.013	1.134	1.062	0.983	1.046	4.98
123)	hexachlorobutadiene	0.375	0.390	0.377	0.392	0.391	0.380	0.388	0.381	0.403	0.386	2.28
124)	naphthalene	3.429		3.217	3.582	3.383	3.511	3.440	3.500	3.237	3.412	3.79
125)	1,2,3-trichlorobenzene	1.017	0.991	0.950	1.052	1.027	0.876	1.046	1.019	0.964	0.993	5.64
126)	hexachloroethane	0.457	0.410	0.460	0.498	0.494	0.386	0.523	0.469	0.471	0.463	9.25
127)	Benzyl chloride	2.153	2.181	1.987	2.276	2.199	1.893	2.269	2.200	1.972	2.126	6.54
128)	2-ethylhexyl acrylate	0.577		0.495	0.761	0.814		0.831	0.653		0.689	19.71
129)	2-methylnaphthalene	1.245		1.116	1.502	1.464		1.571	1.364	1.069	1.333	14.61

(#) = Out of Range ### Number of calibration levels exceeded format ###

M2V1992.M

Mon Apr 23 10:51:22 2018 RPT1

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Initial Calibration Verification

Job Number: JC65632

Sample: V2V1992-ICV1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49947.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2V1992\2V49947.D Vial: 13
 Acq On : 21 Apr 2018 2:24 am Operator: JessicaP
 Sample : icv1992-50 Inst : MS2V
 Misc : MS25736,V2V1992,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 Last Update : Mon Apr 23 10:50:09 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	TrueValue	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.	
1 I	Tert Butyl Alcohol-d9	500.00	1.000	1.000	0.0	102	0.00	2.27
2	ethanol	5000.00	0.161	0.156	3.1	104	0.00	1.78
3 M	tertiary butyl alcohol	250.00	1.448	1.428	1.4	105	0.00	2.32
4	1,4-dioxane	1250.00	0.137	0.137	0.0	105	0.00	4.28
5 I	pentafluorobenzene	50.00	1.000	1.000	0.0	103	0.00	3.36
6	chlorodifluoromethane			-----NA-----				
7	dichlorodifluoromethane	50.00	0.967	1.029	-6.4	111	0.00	1.13
8	freon 114			-----NA-----				
9	freon 142b			-----NA-----				
10	chloromethane	50.00	1.047	1.057	-1.0	105	0.00	1.24
11	v vinyl chloride	50.00	0.865	0.828	4.3	102	0.00	1.30
12	bromomethane	50.00	0.338	68.550	-37.1#	128	0.00	1.49
13	chloroethane	50.00	0.350	0.361	-3.1	121	0.00	1.55
14	trichlorofluoromethane	50.00	1.081	1.063	1.7	104	0.00	1.69
15	vinyl bromide	50.00	0.576	0.577	-0.2	106	0.00	1.66
16	1,3-butadiene			-----NA-----				
17	ethyl ether	50.00	0.310	0.299	3.5	102	0.00	1.85
18	2-chloropropane	50.00	0.911	0.911	0.0	108	0.00	1.92
19	acrolein	50.00	0.181	0.193	-6.6	116	0.00	1.93
20	freon 113	50.00	0.376	0.361	4.0	105	0.00	1.99
21	1,1-dichloroethene	50.00	0.970	0.869	10.4	94	0.00	1.99
22	acetone	200.00	0.074	0.075	-1.4	106	0.00	2.01
23	acetonitrile			-----NA-----				
24	iodomethane	50.00	0.048	61.459	-22.9	141	0.00	2.08
25	carbon disulfide	50.00	1.494	1.522	-1.9	112	0.00	2.12
26	methylene chloride	50.00	0.661	0.608	8.0	103	0.00	2.27
27	methyl acetate	50.00	0.650	0.613	5.7	101	0.00	2.18
28	methyl tert butyl ether	50.00	1.822	1.833	-0.6	106	0.00	2.42
29	trans-1,2-dichloroethene	50.00	0.586	0.549	6.3	102	0.00	2.43
30	hexane	50.00	0.355	0.344	3.1	103	0.00	2.59
31	di-isopropyl ether	50.00	2.062	2.067	-0.2	105	0.00	2.70
32	ethyl tert-butyl ether	50.00	1.916	1.930	-0.7	104	0.00	2.92
33 M	1,1-dichloroethane	50.00	1.225	1.183	3.4	102	0.00	2.69

Initial Calibration Verification

Job Number: JC65632

Sample: V2V1992-ICV1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49947.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

34	chloroprene	50.00	0.882	0.887	-0.6	103	0.00	2.73
35	acrylonitrile	50.00	0.312	0.349	-11.9	116	0.00	2.40
36	vinyl acetate	50.00	0.095	0.107	-12.6	113	0.00	2.68
37	ethyl acetate	50.00	0.146	0.147	-0.7	103	0.00	3.04
38	2-butanone	200.00	0.095	0.099	-4.2	104	0.00	3.03
39	2,2-dichloropropane	50.00	0.849	0.821	3.3	102	0.00	3.05
40	cis-1,2-dichloroethene	50.00	0.673	0.666	1.0	106	0.00	3.04
41	propionitrile	500.00	0.147	0.147	0.0	102	0.00	3.07
42	methyl acrylate	50.00	0.128	0.133	-3.9	104	0.00	3.07
43	bromochloromethane	50.00	0.300	0.317	-5.7	107	0.00	3.19
44	tetrahydrofuran	50.00	0.116	0.115	0.9	102	0.00	3.20
45	chloroform	50.00	1.228	1.187	3.3	104	0.00	3.25
46 S	dibromofluoromethane (s)	50.00	0.503	0.510	-1.4	104	0.00	3.35
47	methacrylonitrile	50.00	0.323	0.339	-5.0	105	0.00	3.16
48	1,1,1-trichloroethane	50.00	0.999	0.947	5.2	100	0.00	3.36
49	cyclohexane	50.00	0.739	0.769	-4.1	112	0.00	3.41
50	1,1-dichloropropene	50.00	0.907	0.876	3.4	103	0.00	3.46
51	carbon tetrachloride	50.00	0.806	0.771	4.3	101	0.00	3.46
52	isobutyl alcohol	500.00	0.042	0.045	-7.1	107	0.00	3.51
53	tert-amyl alcohol	250.00	0.039	0.040	-2.6	105	0.00	3.59
54 I	1,4-difluorobenzene	50.00	1.000	1.000	0.0	103	0.00	3.88
55 S	1,2-dichloroethane-d4 (s)	50.00	0.348	0.347	0.3	103	0.00	3.58
56	n-butyl alcohol	2500.00	0.019	0.020	-5.3	104	0.00	3.96
57 M	benzene	50.00	1.650	1.603	2.8	104	0.00	3.60
58	tert-amyl methyl ether	50.00	1.226	1.241	-1.2	104	0.00	3.68
59	iso-octane	50.00	1.022	0.971	5.0	100	0.00	3.67
60	heptane	50.00	0.212	0.223	-5.2	111	0.00	3.78
61	isopropyl acetate	50.00	0.084	0.088	-4.8	107	0.00	3.61
62	1,2-dichloroethane	50.00	0.632	0.612	3.2	105	0.00	3.62
63	trichloroethene	50.00	0.448	0.438	2.2	104	0.00	4.04
64	ethyl acrylate	50.00	0.673	0.729	-8.3	107	0.00	4.09
65	2-nitropropane	50.00	0.132	0.149	-12.9	112	0.00	4.58
66	2-chloroethyl vinyl ether	250.00	0.247	0.288	-16.6	104	0.00	4.63
67	methyl methacrylate	50.00	0.327	0.352	-7.6	106	0.00	4.26
68	1,2-dichloropropane	50.00	0.479	0.468	2.3	104	0.00	4.23
69	methylcyclohexane	50.00	0.586	0.569	2.9	101	0.00	4.22
70	dibromomethane	50.00	0.336	0.347	-3.3	110	0.00	4.29
71	bromodichloromethane	50.00	0.624	0.631	-1.1	104	0.00	4.42
72	epichlorohydrin	250.00	0.054	0.057	-5.6	104	0.00	4.66
73	cis-1,3-dichloropropene	50.00	0.703	0.738	-5.0	106	0.00	4.75
74	4-methyl-2-pentanone	200.00	0.224	0.240	-7.1	105	0.00	4.86
75	3-methyl-1-butanol	1000.00	0.015	0.017	-13.3	103	0.00	4.90
76 I	chlorobenzene-d5	50.00	1.000	1.000	0.0	103	0.00	6.17
77 S	toluene-d8 (s)	50.00	1.292	1.279	1.0	103	0.00	4.96
78	toluene	50.00	1.142	1.100	3.7	104	0.00	5.01
79	ethyl methacrylate	50.00	0.663	0.705	-6.3	103	0.00	5.24
80	trans-1,3-dichloropropene	50.00	0.744	0.764	-2.7	103	0.00	5.19
81	1,1,2-trichloroethane	50.00	0.458	0.454	0.9	104	0.00	5.35
82	2-hexanone	200.00	0.267	0.281	-5.2	103	0.00	5.53
83	tetrachloroethene	-----	-----	-----	-----	-----	-----	-----
84	1,3-dichloropropane	50.00	0.759	0.777	-2.4	108	0.00	5.49
85	butyl acetate	50.00	0.400	0.431	-7.7	109	0.00	5.63
86	dibromochloromethane	50.00	0.543	0.590	-8.7	109	0.00	5.66
87	1,2-dibromoethane	50.00	0.571	0.587	-2.8	106	0.00	5.77
88	n-butyl ether	50.00	1.991	1.997	-0.3	101	0.00	6.29
89	chlorobenzene	50.00	1.210	1.185	2.1	105	0.00	6.19
90	1,1,1,2-tetrachloroethane	50.00	0.431	0.453	-5.1	107	0.00	6.27
91	ethylbenzene	50.00	2.096	2.111	-0.7	104	0.00	6.28

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Initial Calibration Verification

Job Number: JC65632

Sample: V2V1992-ICV1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49947.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92	m,p-xylene	100.00	0.750	0.751	-0.1	105	0.00	6.40
93	o-xylene	50.00	1.627	1.643	-1.0	104	0.00	6.74
94	styrene	50.00	1.210	1.289	-6.5	105	0.00	6.76
95	butyl acrylate	50.00	0.476	0.539	-13.2	105	0.00	6.71
96	bromoform	50.00	0.358	0.415	-15.9	111	0.00	6.91
97	isopropylbenzene	50.00	1.842	1.872	-1.6	105	0.00	7.08
98	cis-1,4-dichloro-2-butene	50.00	0.213	0.232	-8.9	101	0.00	7.14
99 I	1,4-dichlorobenzene-d4	50.00	1.000	1.000	0.0	101	0.00	8.33
100 S	4-bromofluorobenzene (s)	50.00	1.017	1.020	-0.3	103	0.00	7.23
101	bromobenzene	50.00	1.066	1.080	-1.3	106	0.00	7.36
102	1,1,2,2-tetrachloroethane	50.00	1.712	1.713	-0.1	102	0.00	7.37
103	trans-1,4-dichloro-2-bute	50.00	0.352	0.405	-15.1	110	0.00	7.40
104	1,2,3-trichloropropane	50.00	0.358	0.368	-2.8	105	0.00	7.42
105	n-propylbenzene	50.00	4.957	5.022	-1.3	103	0.00	7.47
106	2-chlorotoluene	50.00	0.952	0.950	0.2	103	0.00	7.54
107	4-chlorotoluene	50.00	0.968	0.984	-1.7	106	0.00	7.66
108	4-ethyltoluene				-----NA-----			
109	1,3,5-trimethylbenzene	50.00	3.137	3.222	-2.7	103	0.00	7.65
110	tert-butylbenzene	50.00	2.510	3.218	-28.2	129	0.00	7.94
111	1,2,4-trimethylbenzene	50.00	3.467	3.357	3.2	107	0.00	8.00
112	sec-butylbenzene	50.00	3.862	3.999	-3.5	103	0.00	8.15
113	1,3-dichlorobenzene	50.00	1.818	1.839	-1.2	104	0.00	8.25
114	p-isopropyltoluene	50.00	3.010	3.147	-4.6	103	0.00	8.31
115	1,4-dichlorobenzene	50.00	1.873	1.876	-0.2	104	0.00	8.35
116	1,2-dichlorobenzene	50.00	1.779	1.815	-2.0	103	0.00	8.69
117	1,4-diethylbenzene				-----NA-----			
118	n-butylbenzene	50.00	1.614	1.691	-4.8	101	0.00	8.70
119	1,2,4,5-tetramethylbenzen				-----NA-----			
120	1,2-dibromo-3-chloropropa	50.00	0.280	0.310	-10.7	101	0.00	9.46
121	1,3,5-trichlorobenzene	50.00	1.174	1.225	-4.3	101	0.00	9.64
122	1,2,4-trichlorobenzene	50.00	1.046	1.125	-7.6	104	0.00	10.27
123	hexachlorobutadiene	50.00	0.386	0.385	0.3	100	0.00	10.42
124	naphthalene	50.00	3.412	3.664	-7.4	104	0.00	10.52
125	1,2,3-trichlorobenzene	50.00	0.993	1.043	-5.0	101	0.00	10.73
126	hexachloroethane	50.00	0.463	0.502	-8.4	102	0.00	8.95
127	Benzyl chloride	50.00	2.126	1.866	12.2	83	0.00	8.47
128	2-ethylhexyl acrylate	10.00	0.689	0.826	-19.9	110	0.00	10.52
129	2-methylnaphthalene	25.00	1.333	1.429	-7.2	97	0.00	11.61

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

2V49942.D M2V1992.M

Mon Apr 23 10:51:12 2018 RPT1

6.9.2
6

Initial Calibration Verification

Job Number: JC65632

Sample: V2V1992-ICV1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49948.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2V1992\2V49948.D Vial: 14
 Acq On : 21 Apr 2018 2:50 am Operator: JessicaP
 Sample : icv1992-50 Inst : MS2V
 Misc : MS25736,V2V1992,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 Last Update : Mon Apr 23 10:47:36 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	TrueValue	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	Tert Butyl Alcohol-d9	500.00	1.000	1.000	0.0	103	0.00
2	ethanol		-----	NA-----			
3 M	tertiary butyl alcohol		-----	NA-----			
4	1,4-dioxane		-----	NA-----			
5 I	pentafluorobenzene	50.00	1.000	1.000	0.0	104	0.00
6	chlorodifluoromethane	50.00	0.790	0.927	-17.3	126	0.00
7	dichlorodifluoromethane		-----	NA-----			
8	freon 114		-----	NA-----			
9	freon 142b		-----	NA-----			
10	chloromethane		-----	NA-----			
11	vinyl chloride		-----	NA-----			
12	bromomethane		-----	NA-----			
13	chloroethane		-----	NA-----			
14	trichlorofluoromethane		-----	NA-----			
15	vinyl bromide		-----	NA-----			
16	1,3-butadiene		-----	NA-----			
17	ethyl ether		-----	NA-----			
18	2-chloropropane		-----	NA-----			
19	acrolein		-----	NA-----			
20	freon 113		-----	NA-----			
21	1,1-dichloroethene		-----	NA-----			
22	acetone		-----	NA-----			
23	acetonitrile	500.00	0.118	0.122	-3.4	112	0.00
24	iodomethane		-----	NA-----			
25	carbon disulfide		-----	NA-----			
26	methylene chloride		-----	NA-----			
27	methyl acetate		-----	NA-----			
28	methyl tert butyl ether		-----	NA-----			
29	trans-1,2-dichloroethene		-----	NA-----			
30	hexane		-----	NA-----			
31	di-isopropyl ether		-----	NA-----			
32	ethyl tert-butyl ether		-----	NA-----			
33 M	1,1-dichloroethane		-----	NA-----			
34	chloroprene		-----	NA-----			
35	acrylonitrile		-----	NA-----			
36	vinyl acetate		-----	NA-----			
37	ethyl acetate		-----	NA-----			
38	2-butanone		-----	NA-----			
39	2,2-dichloropropane		-----	NA-----			
40	cis-1,2-dichloroethene		-----	NA-----			
41	propionitrile		-----	NA-----			

Initial Calibration Verification

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2V1992-ICV1992
Lab FileID: 2V49948.D

42	methyl acrylate		-----	-NA-----							
43	bromochloromethane		-----	-NA-----							
44	tetrahydrofuran		-----	-NA-----							
45	chloroform		-----	-NA-----							
46 S	dibromofluoromethane (s)	50.00	0.503	0.498	1.0	102	0.00	3.35			
47	methacrylonitrile		-----	-NA-----							
48	1,1,1-trichloroethane		-----	-NA-----							
49	cyclohexane		-----	-NA-----							
50	1,1-dichloropropene		-----	-NA-----							
51	carbon tetrachloride		-----	-NA-----							
52	isobutyl alcohol		-----	-NA-----							
53	tert-amyl alcohol		-----	-NA-----							
54 I	1,4-difluorobenzene	50.00	1.000	1.000	0.0	102	0.00	3.88			
55 S	1,2-dichloroethane-d4 (s)	50.00	0.348	0.354	-1.7	104	0.00	3.58			
56	n-butyl alcohol		-----	-NA-----							
57 M	benzene		-----	-NA-----							
58	tert-amyl methyl ether		-----	-NA-----							
59	iso-octane		-----	-NA-----							
60	heptane		-----	-NA-----							
61	isopropyl acetate		-----	-NA-----							
62	1,2-dichloroethane		-----	-NA-----							
63	trichloroethene		-----	-NA-----							
64	ethyl acrylate		-----	-NA-----							
65	2-nitropropane		-----	-NA-----							
66	2-chloroethyl vinyl ether		-----	-NA-----							
67	methyl methacrylate		-----	-NA-----							
68	1,2-dichloropropane		-----	-NA-----							
69	methylcyclohexane		-----	-NA-----							
70	dibromomethane		-----	-NA-----							
71	bromodichloromethane		-----	-NA-----							
72	epichlorohydrin		-----	-NA-----							
73	cis-1,3-dichloropropene		-----	-NA-----							
74	4-methyl-2-pentanone		-----	-NA-----							
75	3-methyl-1-butanol		-----	-NA-----							
76 I	chlorobenzene-d5	50.00	1.000	1.000	0.0	98	0.00	6.16			
77 S	toluene-d8 (s)	50.00	1.292	1.288	0.3	99	0.00	4.96			
78	toluene		-----	-NA-----							
79	ethyl methacrylate		-----	-NA-----							
80	trans-1,3-dichloropropene		-----	-NA-----							
81	1,1,2-trichloroethane		-----	-NA-----							
82	2-hexanone		-----	-NA-----							
83	tetrachloroethene	50.00	0.367	0.361	1.6	101	0.00	5.43			
84	1,3-dichloropropane		-----	-NA-----							
85	butyl acetate		-----	-NA-----							
86	dibromochloromethane		-----	-NA-----							
87	1,2-dibromoethane		-----	-NA-----							
88	n-butyl ether		-----	-NA-----							
89	chlorobenzene		-----	-NA-----							
90	1,1,1,2-tetrachloroethane		-----	-NA-----							
91	ethylbenzene		-----	-NA-----							
92	m,p-xylene		-----	-NA-----							
93	o-xylene		-----	-NA-----							
94	styrene		-----	-NA-----							
95	butyl acrylate		-----	-NA-----							
96	bromoform		-----	-NA-----							
97	isopropylbenzene		-----	-NA-----							
98	cis-1,4-dichloro-2-butene		-----	-NA-----							

6.9.3
6

Initial Calibration Verification

Job Number: JC65632

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample: V2V1992-ICV1992

Lab FileID: 2V49948.D

99 I	1,4-dichlorobenzene-d4	50.00	1.000	1.000	0.0	96	0.00	8.33
100 S	4-bromofluorobenzene (s)	50.00	1.017	1.035	-1.8	99	0.00	7.23
101	bromobenzene		-----	NA-----				
102	1,1,2,2-tetrachloroethane		-----	NA-----				
103	trans-1,4-dichloro-2-bute		-----	NA-----				
104	1,2,3-trichloropropane		-----	NA-----				
105	n-propylbenzene		-----	NA-----				
106	2-chlorotoluene		-----	NA-----				
107	4-chlorotoluene		-----	NA-----				
108	4-ethyltoluene		-----	NA-----				
109	1,3,5-trimethylbenzene		-----	NA-----				
110	tert-butylbenzene		-----	NA-----				
111	1,2,4-trimethylbenzene		-----	NA-----				
112	sec-butylbenzene		-----	NA-----				
113	1,3-dichlorobenzene		-----	NA-----				
114	p-isopropyltoluene		-----	NA-----				
115	1,4-dichlorobenzene		-----	NA-----				
116	1,2-dichlorobenzene		-----	NA-----				
117	1,4-diethylbenzene		-----	NA-----				
118	n-butylbenzene		-----	NA-----				
119	1,2,4,5-tetramethylbenzen		-----	NA-----				
120	1,2-dibromo-3-chloropropa		-----	NA-----				
121	1,3,5-trichlorobenzene		-----	NA-----				
122	1,2,4-trichlorobenzene		-----	NA-----				
123	hexachlorobutadiene		-----	NA-----				
124	naphthalene		-----	NA-----				
125	1,2,3-trichlorobenzene		-----	NA-----				
126	hexachloroethane		-----	NA-----				
127	Benzyl chloride		-----	NA-----				
128	2-ethylhexyl acrylate		-----	NA-----				
129	2-methylnaphthalene		-----	NA-----				

(#) = Out of Range

2V49942.D M2V1992.M

SPCC's out = 0 CCC's out = 0

Mon Apr 23 10:48:25 2018 RPT1

Initial Calibration Verification

Job Number: JC65632

Sample: V2V1992-ICV1992

Account: UTC United Technologies Corporation

Lab FileID: 2V49952.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\V2V1992\2V49952.D Vial: 2
 Acq On : 23 Apr 2018 9:14 am Operator: JessicaP
 Sample : icv1992-50 Inst : MS2V
 Misc : MS25736,V2V1992,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 Last Update : Mon Apr 23 10:47:36 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	TrueValue	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
<hr/>							
1 I	Tert Butyl Alcohol-d9	500.00	1.000	1.000	0.0	110	0.00
2	ethanol		-----	NA-----			
3 M	tertiary butyl alcohol		-----	NA-----			
4	1,4-dioxane		-----	NA-----			
5 I	pentafluorobenzene	50.00	1.000	1.000	0.0	113	0.00
6	chlorodifluoromethane		-----	NA-----			
7	dichlorodifluoromethane		-----	NA-----			
8	freon 114		-----	NA-----			
9	freon 142b		-----	NA-----			
10	chloromethane		-----	NA-----			
11	v vinyl chloride		-----	NA-----			
<hr/>							
12	bromomethane	50.00	0.273	49.707	0.6	113	0.00
13	chloroethane		-----	NA-----			
14	trichlorofluoromethane		-----	NA-----			
15	vinyl bromide		-----	NA-----			
16	1,3-butadiene		-----	NA-----			
17	ethyl ether		-----	NA-----			
18	2-chloropropane		-----	NA-----			
19	acrolein		-----	NA-----			
20	freon 113		-----	NA-----			
21	1,1-dichloroethene		-----	NA-----			
22	acetone		-----	NA-----			
23	acetonitrile		-----	NA-----			
24	iodomethane		-----	NA-----			
25	carbon disulfide		-----	NA-----			
26	methylene chloride		-----	NA-----			
27	methyl acetate		-----	NA-----			
28	methyl tert butyl ether		-----	NA-----			
29	trans-1,2-dichloroethene		-----	NA-----			
30	hexane		-----	NA-----			
31	di-isopropyl ether		-----	NA-----			
32	ethyl tert-butyl ether		-----	NA-----			
33 M	1,1-dichloroethane		-----	NA-----			
34	chloroprene		-----	NA-----			
35	acrylonitrile		-----	NA-----			
36	v vinyl acetate		-----	NA-----			
37	ethyl acetate		-----	NA-----			
38	2-butanone		-----	NA-----			
39	2,2-dichloropropane		-----	NA-----			

Initial Calibration Verification**Job Number:** JC65632**Account:** UTC United Technologies Corporation**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Sample:** V2V1992-ICV1992
Lab FileID: 2V49952.D

40	cis-1,2-dichloroethene	-----	-NA-----						
41	propionitrile	-----	-NA-----						
42	methyl acrylate	-----	-NA-----						
43	bromochloromethane	-----	-NA-----						
44	tetrahydrofuran	-----	-NA-----						
45	chloroform	-----	-NA-----						
		-----	-----	TrueValue	AvgRF	CCRF	% Dev	-----	R.T.
46 S	dibromofluoromethane (s)	50.00	0.503	0.491	2.4	109	0.00	3.35	
47	methacrylonitrile	-----	-NA-----						
48	1,1,1-trichloroethane	-----	-NA-----						
49	cyclohexane	-----	-NA-----						
50	1,1-dichloropropene	-----	-NA-----						
51	carbon tetrachloride	-----	-NA-----						
52	isobutyl alcohol	-----	-NA-----						
53	tert-amyl alcohol	-----	-NA-----						
54 I	1,4-difluorobenzene	50.00	1.000	1.000	0.0	111	0.00	3.88	
55 S	1,2-dichloroethane-d4 (s)	50.00	0.348	0.340	2.3	109	0.00	3.58	
56	n-butyl alcohol	-----	-NA-----						
57 M	benzene	-----	-NA-----						
58	tert-amyl methyl ether	-----	-NA-----						
59	iso-octane	-----	-NA-----						
60	heptane	-----	-NA-----						
61	isopropyl acetate	-----	-NA-----						
62	1,2-dichloroethane	-----	-NA-----						
63	trichloroethene	-----	-NA-----						
64	ethyl acrylate	-----	-NA-----						
65	2-nitropropane	-----	-NA-----						
66	2-chloroethyl vinyl ether	-----	-NA-----						
67	methyl methacrylate	-----	-NA-----						
68	1,2-dichloropropane	-----	-NA-----						
69	methylcyclohexane	-----	-NA-----						
70	dibromomethane	-----	-NA-----						
71	bromodichloromethane	-----	-NA-----						
72	epichlorohydrin	-----	-NA-----						
73	cis-1,3-dichloropropene	-----	-NA-----						
74	4-methyl-2-pentanone	-----	-NA-----						
75	3-methyl-1-butanol	-----	-NA-----						
76 I	chlorobenzene-d5	50.00	1.000	1.000	0.0	106	0.00	6.16	
77 S	toluene-d8 (s)	50.00	1.292	1.296	-0.3	108	0.00	4.96	
78	toluene	-----	-NA-----						
79	ethyl methacrylate	-----	-NA-----						
80	trans-1,3-dichloropropene	-----	-NA-----						
81	1,1,2-trichloroethane	-----	-NA-----						
82	2-hexanone	-----	-NA-----						
83	tetrachloroethene	-----	-NA-----						
84	1,3-dichloropropane	-----	-NA-----						
85	butyl acetate	-----	-NA-----						
86	dibromochloromethane	-----	-NA-----						
87	1,2-dibromoethane	-----	-NA-----						
88	n-butyl ether	-----	-NA-----						
89	chlorobenzene	-----	-NA-----						
90	1,1,1,2-tetrachloroethane	-----	-NA-----						
91	ethylbenzene	-----	-NA-----						
92	m,p-xylene	-----	-NA-----						
93	o-xylene	-----	-NA-----						
94	styrene	-----	-NA-----						
95	butyl acrylate	-----	-NA-----						

6.9.4
6

Initial Calibration Verification**Job Number:** JC65632**Account:** UTC United Technologies Corporation**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL**Sample:** V2V1992-ICV1992
Lab FileID: 2V49952.D

96	bromoform		-----	-NA-----							
97	isopropylbenzene		-----	-NA-----							
98	cis-1,4-dichloro-2-butene		-----	-NA-----							
99 I	1,4-dichlorobenzene-d4	50.00	1.000	1.000	0.0	102	0.00	8.33			
100 S	4-bromofluorobenzene (s)	50.00	1.017	1.040	-2.3	106	0.00	7.23			
101	bromobenzene		-----	-NA-----							
102	1,1,2,2-tetrachloroethane		-----	-NA-----							
103	trans-1,4-dichloro-2-bute		-----	-NA-----							
104	1,2,3-trichloropropane		-----	-NA-----							
105	n-propylbenzene		-----	-NA-----							
106	2-chlorotoluene		-----	-NA-----							
107	4-chlorotoluene		-----	-NA-----							
108	4-ethyltoluene		-----	-NA-----							
109	1,3,5-trimethylbenzene		-----	-NA-----							
110	tert-butylbenzene		-----	-NA-----							
111	1,2,4-trimethylbenzene		-----	-NA-----							
112	sec-butylbenzene		-----	-NA-----							
113	1,3-dichlorobenzene		-----	-NA-----							
114	p-isopropyltoluene		-----	-NA-----							
115	1,4-dichlorobenzene		-----	-NA-----							
116	1,2-dichlorobenzene		-----	-NA-----							
117	1,4-diethylbenzene		-----	-NA-----							
118	n-butylbenzene		-----	-NA-----							
119	1,2,4,5-tetramethylbenzen		-----	-NA-----							
120	1,2-dibromo-3-chloropropa		-----	-NA-----							
121	1,3,5-trichlorobenzene		-----	-NA-----							
122	1,2,4-trichlorobenzene		-----	-NA-----							
123	hexachlorobutadiene		-----	-NA-----							
124	naphthalene		-----	-NA-----							
125	1,2,3-trichlorobenzene		-----	-NA-----							
126	hexachloroethane		-----	-NA-----							
127	Benzyl chloride		-----	-NA-----							
128	2-ethylhexyl acrylate		-----	-NA-----							
129	2-methylnaphthalene		-----	-NA-----							
		-----	-----	-----							
		-----	-----	-----							

(#) = Out of Range

2V49942.D M2V1992.M

SPCC's out = 0 CCC's out = 0

Mon Apr 23 10:48:28 2018 RPT1

Continuing Calibration Summary

Job Number: JC65632

Sample: V2V2014-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50456.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...-18\v2v2014\2v50456.d Vial: 5
 Acq On : 9 May 2018 10:22 am Operator: JessicaP
 Sample : CC1992-20 Inst : MS2V
 Misc : MS26108,V2V2014,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 Last Update : Mon Apr 23 10:50:09 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	92	0.00
2	ethanol	0.161	0.174	-8.1	101	0.00
3 M	tertiary butyl alcohol	1.448	1.688	-16.6	110	0.00
4	1,4-dioxane	0.137	0.139	-1.5	96	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00
6	chlorodifluoromethane	0.790	0.725	8.2	86	0.00
7	dichlorodifluoromethane	0.967	0.714	26.2#	68	0.00
8	freon 114			-----NA-----		
9	freon 142b			-----NA-----		
10	chloromethane	1.047	1.013	3.2	91	0.00
11	vinyl chloride	0.865	0.904	-4.5	99	0.00
12	bromomethane	20.000	33.538	-67.7#	142	0.00
13	chloroethane	0.350	0.385	-10.0	107	0.00
14	trichlorofluoromethane	1.081	1.089	-0.7	94	0.00
15	vinyl bromide	0.576	0.630	-9.4	104	0.00
16	1,3-butadiene			-----NA-----		
17	ethyl ether	0.310	0.335	-8.1	104	0.00
18	2-chloropropane	0.911	1.107	-21.5#	115	0.00
19	acrolein	0.181	0.192	-6.1	102	0.00
20	freon 113	0.376	0.423	-12.5	105	0.00
21	1,1-dichloroethene	0.970	1.159	-19.5	111	0.00
22	acetone	0.074	0.080	-8.1	103	0.00
23	acetonitrile	0.118	0.131	-11.0	105	0.00
24	iodomethane	20.000	25.856	-29.3#	146	0.00
25	carbon disulfide	1.494	1.645	-10.1	106	0.00
26	methylene chloride	0.661	0.689	-4.2	102	0.00
27	methyl acetate	0.650	0.773	-18.9	113	0.00
28	methyl tert butyl ether	1.822	2.003	-9.9	104	0.00
29	trans-1,2-dichloroethene	0.586	0.644	-9.9	104	0.00
30	hexane	0.355	0.384	-8.2	99	0.00
31	di-isopropyl ether	2.062	2.386	-15.7	108	0.00
32	ethyl tert-butyl ether	1.916	2.038	-6.4	101	0.00
33 M	1,1-dichloroethane	1.225	1.387	-13.2	106	0.00

6.9.5

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Continuing Calibration Summary

Page 2 of 3

Job Number: JC65632

Sample: V2V2014-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50456.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

34	chloroprene	0.882	1.045	-18.5	109	0.00	2.73
35	acrylonitrile	0.312	0.337	-8.0	100	0.00	2.40
36	vinyl acetate	0.095	0.106	-11.6	103	0.00	2.68
37	ethyl acetate	0.146	0.164	-12.3	103	0.00	3.04
38	2-butanone	0.095	0.103	-8.4	101	0.00	3.02
39	2,2-dichloropropane	0.849	1.078	-27.0#	122	0.00	3.05
40	cis-1,2-dichloroethene	0.673	0.728	-8.2	102	0.00	3.04
41	propionitrile	0.147	0.163	-10.9	102	0.00	3.06
42	methyl acrylate	0.128	0.138	-7.8	97	0.00	3.07
43	bromochloromethane	0.300	0.334	-11.3	101	0.00	3.19
44	tetrahydrofuran	0.116	0.116	0.0	92	0.00	3.19
45	chloroform	1.228	1.337	-8.9	105	0.00	3.25
46 S	dibromofluoromethane (s)	0.503	0.562	-11.7	105	0.00	3.35
47	methacrylonitrile	0.323	0.357	-10.5	101	0.00	3.16
48	1,1,1-trichloroethane	0.999	1.118	-11.9	106	0.00	3.36
49	cyclohexane	0.739	0.718	2.8	91	0.00	3.41
50	1,1-dichloropropene	0.907	0.994	-9.6	105	0.00	3.47
51	carbon tetrachloride	0.806	0.860	-6.7	101	0.00	3.46
52	isobutyl alcohol	0.042	0.053	-26.2#	116	0.00	3.50
53	tert-amyl alcohol	0.039	0.044	-12.8	101	0.00	3.58
54 I	1,4-difluorobenzene	1.000	1.000	0.0	96	0.00	3.88
55 S	1,2-dichloroethane-d4 (s)	0.348	0.408	-17.2	114	0.00	3.58
56	n-butyl alcohol	0.019	0.022	-15.8	104	0.00	3.95
57 M	benzene	1.650	1.722	-4.4	100	0.00	3.60
58	tert-amyl methyl ether	1.226	1.271	-3.7	98	0.00	3.67
59	iso-octane	1.022	1.069	-4.6	98	0.00	3.67
60	heptane	0.212	0.223	-5.2	100	0.00	3.78
61	isopropyl acetate	0.084	0.088	-4.8	96	0.00	3.61
62	1,2-dichloroethane	0.632	0.715	-13.1	110	0.00	3.62
63	trichloroethene	0.448	0.458	-2.2	99	0.00	4.04
64	ethyl acrylate	0.673	0.760	-12.9	103	0.00	4.09
65	2-nitropropane	0.132	0.175	-32.6#	125	0.00	4.58
66	2-chloroethyl vinyl ether	0.247	0.070	71.7#	26#	0.00	4.63
67	methyl methacrylate	0.327	0.365	-11.6	102	0.00	4.26
68	1,2-dichloropropane	0.479	0.533	-11.3	106	0.00	4.23
69	methylcyclohexane	0.586	0.574	2.0	90	0.00	4.22
70	dibromomethane	0.336	0.364	-8.3	104	0.00	4.29
71	bromodichloromethane	0.624	0.705	-13.0	107	0.00	4.42
72	epichlorohydrin	0.054	0.060	-11.1	97	0.00	4.66
73	cis-1,3-dichloropropene	0.703	0.781	-11.1	104	0.00	4.75
74	4-methyl-2-pentanone	0.224	0.253	-12.9	102	0.00	4.86
75	3-methyl-1-butanol	0.015	0.017	-13.3	101	0.00	4.90
76 I	chlorobenzene-d5	1.000	1.000	0.0	94	0.00	6.17
77 S	toluene-d8 (s)	1.292	1.341	-3.8	97	0.00	4.96
78	toluene	1.142	1.171	-2.5	98	0.00	5.01
79	ethyl methacrylate	0.663	0.750	-13.1	100	0.00	5.24
80	trans-1,3-dichloropropene	0.744	0.867	-16.5	106	0.00	5.19
81	1,1,2-trichloroethane	0.458	0.485	-5.9	100	0.00	5.35
82	2-hexanone	0.267	0.294	-10.1	96	0.00	5.53
83	tetrachloroethene	0.367	0.402	-9.5	102	0.00	5.43
84	1,3-dichloropropane	0.759	0.815	-7.4	101	0.00	5.49
85	butyl acetate	0.400	0.433	-8.2	99	0.00	5.63
86	dibromochloromethane	0.543	0.651	-19.9	110	0.00	5.66
87	1,2-dibromoethane	0.571	0.630	-10.3	104	0.00	5.77
88	n-butyl ether	1.991	2.203	-10.6	100	0.00	6.29
89	chlorobenzene	1.210	1.284	-6.1	101	0.00	6.19
90	1,1,1,2-tetrachloroethane	0.431	0.499	-15.8	106	0.00	6.27
91	ethylbenzene	2.096	2.298	-9.6	102	0.00	6.28

Continuing Calibration Summary

Page 3 of 3

Job Number: JC65632

Sample: V2V2014-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50456.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92	m,p-xylene	0.750	0.804	-7.2	99	0.00	6.40
93	o-xylene	1.627	1.772	-8.9	100	0.00	6.74
94	styrene	1.210	1.350	-11.6	101	0.00	6.75
95	butyl acrylate	0.476	0.539	-13.2	99	0.00	6.71
96	bromoform	0.358	0.433	-20.9#	110	0.00	6.91
97	isopropylbenzene	1.842	1.999	-8.5	99	0.00	7.08
98	cis-1,4-dichloro-2-butene	0.213	0.280	-31.5#	118	0.00	7.14
99 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	90	0.00	8.33
100 S	4-bromofluorobenzene (s)	1.017	1.068	-5.0	94	0.00	7.23
101	bromobenzene	1.066	1.159	-8.7	99	0.00	7.36
102	1,1,2,2-tetrachloroethane	1.712	1.946	-13.7	100	0.00	7.37
103	trans-1,4-dichloro-2-bute	0.352	0.487	-38.4#	117	0.00	7.40
104	1,2,3-trichloropropane	0.358	0.401	-12.0	99	0.00	7.42
105	n-propylbenzene	4.957	5.665	-14.3	100	0.00	7.47
106	2-chlorotoluene	0.952	1.066	-12.0	100	0.00	7.54
107	4-chlorotoluene	0.968	1.056	-9.1	98	0.00	7.66
108	4-ethyltoluene			-----NA-----			
109	1,3,5-trimethylbenzene	3.137	3.523	-12.3	98	0.00	7.65
110	tert-butylbenzene	2.510	2.760	-10.0	97	0.00	7.94
111	1,2,4-trimethylbenzene	3.467	3.596	-3.7	99	0.00	8.00
112	sec-butylbenzene	3.862	4.350	-12.6	98	0.00	8.15
113	1,3-dichlorobenzene	1.818	2.003	-10.2	100	0.00	8.25
114	p-isopropyltoluene	3.010	3.405	-13.1	99	0.00	8.31
115	1,4-dichlorobenzene	1.873	2.033	-8.5	98	0.00	8.35
116	1,2-dichlorobenzene	1.779	1.982	-11.4	101	0.00	8.69
117	1,4-diethylbenzene			-----NA-----			
118	n-butylbenzene	1.614	1.899	-17.7	101	0.00	8.70
119	1,2,4,5-tetramethylbenzen			-----NA-----			
120	1,2-dibromo-3-chloropropa	0.280	0.328	-17.1	102	0.00	9.46
121	1,3,5-trichlorobenzene	1.174	1.297	-10.5	99	0.00	9.64
122	1,2,4-trichlorobenzene	1.046	1.174	-12.2	99	0.00	10.27
123	hexachlorobutadiene	0.386	0.419	-8.5	99	0.00	10.42
124	naphthalene	3.412	3.782	-10.8	97	0.00	10.51
125	1,2,3-trichlorobenzene	0.993	1.147	-15.5	101	0.00	10.73
126	hexachloroethane	0.463	0.540	-16.6	103	0.00	8.95
127	Benzyl chloride	2.126	2.792	-31.3#	114	0.00	8.46
128	2-ethylhexyl acrylate	0.689	0.779	-13.1	107	0.00	10.52
129	2-methylnaphthalene	1.333	1.492	-11.9	98	0.00	11.60

(#) = Out of Range
2V49941.D M2V1992.M

SPCC's out = 0 CCC's out = 0
Thu May 10 22:15:50 2018

6.9.5
6

Continuing Calibration Summary

Job Number: JC65632

Sample: V2V2015-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50477.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ni...-18\v2v2015\2v50477.d Vial: 2
 Acq On : 10 May 2018 6:26 am Operator: JessicaP
 Sample : cci992-20 Inst : MS2V
 Misc : MS26169,V2V2015,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 Last Update : Mon Apr 23 10:50:09 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	82	0.00
2	ethanol	0.161	0.173	-7.5	89	0.00
3 M	tertiary butyl alcohol	1.448	1.567	-8.2	91	0.00
4	1,4-dioxane	0.137	0.136	0.7	84	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	93	0.00
6	chlorodifluoromethane	0.790	0.738	6.6	86	0.00
7	dichlorodifluoromethane	0.967	1.017	-5.2	95	0.00
8	freon 114			-----NA-----		
9	freon 142b			-----NA-----		
10	chloromethane	1.047	1.107	-5.7	96	0.00
11	vinyl chloride	0.865	0.943	-9.0	101	0.00
12	bromomethane	20.000	20.257	True -1.3	91	0.00
13	chloroethane	0.350	0.422	AvgRF -20.6#	114	0.00
14	trichlorofluoromethane	1.081	1.020	5.6	86	0.00
15	vinyl bromide	0.576	0.513	10.9	82	0.00
16	1,3-butadiene			-----NA-----		
17	ethyl ether	0.310	0.287	7.4	87	0.00
18	2-chloropropane	0.911	1.023	-12.3	104	0.00
19	acrolein	0.181	0.171	5.5	89	0.00
20	freon 113	0.376	0.353	6.1	86	0.00
21	1,1-dichloroethene	0.970	1.009	-4.0	94	0.00
22	acetone	0.074	0.070	5.4	88	0.00
23	acetonitrile	0.118	0.126	-6.8	99	0.00
24	iodomethane	20.000	16.341	True 18.3	83	0.00
25	carbon disulfide	1.494	1.429	AvgRF 4.4	90	0.00
26	methylene chloride	0.661	0.583	11.8	84	0.00
27	methyl acetate	0.650	0.711	-9.4	102	0.00
28	methyl tert butyl ether	1.822	1.735	4.8	88	0.00
29	trans-1,2-dichloroethene	0.586	0.522	10.9	82	0.00
30	hexane	0.355	0.374	-5.4	94	0.00
31	di-isopropyl ether	2.062	2.244	-8.8	99	0.00
32	ethyl tert-butyl ether	1.916	1.838	4.1	89	0.00
33 M	1,1-dichloroethane	1.225	1.211	1.1	90	0.00

6.6.9

6

Continuing Calibration Summary

Page 2 of 3

Job Number: JC65632

Sample: V2V2015-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50477.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

34	chloroprene	0.882	0.925	-4.9	94	0.00	2.73
35	acrylonitrile	0.312	0.316	-1.3	91	0.00	2.40
36	vinyl acetate	0.095	0.088	7.4	83	0.00	2.68
37	ethyl acetate	0.146	0.142	2.7	87	0.00	3.04
38	2-butanone	0.095	0.085	10.5	82	0.00	3.02
39	2,2-dichloropropane	0.849	0.953	-12.2	105	0.00	3.04
40	cis-1,2-dichloroethene	0.673	0.618	8.2	85	0.00	3.04
41	propionitrile	0.147	0.135	8.2	83	0.00	3.06
42	methyl acrylate	0.128	0.120	6.3	83	0.00	3.07
43	bromochloromethane	0.300	0.296	1.3	87	0.00	3.18
44	tetrahydrofuran	0.116	0.105	9.5	81	0.00	3.19
45	chloroform	1.228	1.174	4.4	90	0.00	3.25
46 S	dibromofluoromethane (s)	0.503	0.533	-6.0	97	0.00	3.35
47	methacrylonitrile	0.323	0.301	6.8	83	0.00	3.16
48	1,1,1-trichloroethane	0.999	1.006	-0.7	93	0.00	3.36
49	cyclohexane	0.739	0.598	19.1	74	0.00	3.41
50	1,1-dichloropropene	0.907	0.850	6.3	88	0.00	3.46
51	carbon tetrachloride	0.806	0.858	-6.5	98	0.00	3.46
52	isobutyl alcohol	0.042	0.041	2.4	87	0.00	3.50
53	tert-amyl alcohol	0.039	0.039	0.0	86	0.00	3.58
54 I	1,4-difluorobenzene	1.000	1.000	0.0	91	0.00	3.88
55 S	1,2-dichloroethane-d4 (s)	0.348	0.397	-14.1	105	0.00	3.58
56	n-butyl alcohol	0.019	0.018	5.3	83	0.00	3.95
57 M	benzene	1.650	1.531	7.2	85	0.00	3.60
58	tert-amyl methyl ether	1.226	1.166	4.9	85	0.00	3.67
59	iso-octane	1.022	1.011	1.1	88	0.00	3.67
60	heptane	0.212	0.219	-3.3	93	0.00	3.78
61	isopropyl acetate	0.084	0.081	3.6	84	0.00	3.61
62	1,2-dichloroethane	0.632	0.667	-5.5	97	0.00	3.62
63	trichloroethene	0.448	0.419	6.5	86	0.00	4.04
64	ethyl acrylate	0.673	0.657	2.4	84	0.00	4.09
65	2-nitropropane	0.132	0.161	-22.0#	108	0.00	4.58
66	2-chloroethyl vinyl ether	0.247	0.041	83.4#	14#	0.00	4.63
67	methyl methacrylate	0.327	0.320	2.1	85	0.00	4.26
68	1,2-dichloropropane	0.479	0.460	4.0	87	0.00	4.23
69	methylcyclohexane	0.586	0.549	6.3	82	0.00	4.22
70	dibromomethane	0.336	0.335	0.3	91	0.00	4.29
71	bromodichloromethane	0.624	0.649	-4.0	94	0.00	4.42
72	epichlorohydrin	0.054	0.051	5.6	78	0.00	4.66
73	cis-1,3-dichloropropene	0.703	0.693	1.4	87	0.00	4.75
74	4-methyl-2-pentanone	0.224	0.167	25.4#	63	0.00	4.86
75	3-methyl-1-butanol	0.015	0.012	20.0	66	0.00	4.90
76 I	chlorobenzene-d5	1.000	1.000	0.0	82	0.00	6.16
77 S	toluene-d8 (s)	1.292	1.308	-1.2	83	0.00	4.96
78	toluene	1.142	1.108	3.0	81	0.00	5.01
79	ethyl methacrylate	0.663	0.742	-11.9	86	0.00	5.24
80	trans-1,3-dichloropropene	0.744	0.869	-16.8	93	0.00	5.19
81	1,1,2-trichloroethane	0.458	0.485	-5.9	87	0.00	5.35
82	2-hexanone	0.267	0.303	-13.5	86	0.00	5.53
83	tetrachloroethene	0.367	0.364	0.8	81	0.00	5.43
84	1,3-dichloropropane	0.759	0.814	-7.2	87	0.00	5.49
85	butyl acetate	0.400	0.448	-12.0	89	0.00	5.63
86	dibromochloromethane	0.543	0.597	-9.9	88	0.00	5.66
87	1,2-dibromoethane	0.571	0.596	-4.4	86	0.00	5.76
88	n-butyl ether	1.991	2.257	-13.4	89	0.00	6.29
89	chlorobenzene	1.210	1.189	1.7	81	0.00	6.19
90	1,1,1,2-tetrachloroethane	0.431	0.466	-8.1	87	0.00	6.27
91	ethylbenzene	2.096	2.178	-3.9	84	0.00	6.28

6.9.6
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Continuing Calibration Summary

Job Number: JC65632

Sample: V2V2015-CC1992

Account: UTC United Technologies Corporation

Lab FileID: 2V50477.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92	m,p-xylene	0.750	0.756	-0.8	81	0.00	6.40
93	o-xylene	1.627	1.713	-5.3	85	0.00	6.74
94	styrene	1.210	1.286	-6.3	84	0.00	6.75
95	butyl acrylate	0.476	0.560	-17.6	90	0.00	6.71
96	bromoform	0.358	0.408	-14.0	90	0.00	6.91
97	isopropylbenzene	1.842	1.886	-2.4	82	0.00	7.07
98	cis-1,4-dichloro-2-butene	0.213	0.225	-5.6	82	0.00	7.14
99 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	83	0.00	8.33
100 S	4-bromofluorobenzene (s)	1.017	1.026	-0.9	83	0.00	7.23
101	bromobenzene	1.066	1.054	1.1	83	0.00	7.36
102	1,1,2,2-tetrachloroethane	1.712	1.824	-6.5	87	0.00	7.37
103	trans-1,4-dichloro-2-bute	0.352	0.392	-11.4	87	0.00	7.40
104	1,2,3-trichloropropane	0.358	0.375	-4.7	85	0.00	7.42
105	n-propylbenzene	4.957	5.212	-5.1	85	0.00	7.47
106	2-chlorotoluene	0.952	0.973	-2.2	84	0.00	7.54
107	4-chlorotoluene	0.968	0.968	0.0	83	0.00	7.66
108	4-ethyltoluene			-----NA-----			
109	1,3,5-trimethylbenzene	3.137	3.260	-3.9	84	0.00	7.65
110	tert-butylbenzene	2.510	2.522	-0.5	82	0.00	7.93
111	1,2,4-trimethylbenzene	3.467	3.331	3.9	84	0.00	8.00
112	sec-butylbenzene	3.862	4.012	-3.9	84	0.00	8.15
113	1,3-dichlorobenzene	1.818	1.832	-0.8	84	0.00	8.25
114	p-isopropyltoluene	3.010	3.115	-3.5	84	0.00	8.31
115	1,4-dichlorobenzene	1.873	1.906	-1.8	84	0.00	8.35
116	1,2-dichlorobenzene	1.779	1.818	-2.2	85	0.00	8.69
117	1,4-diethylbenzene			-----NA-----			
118	n-butylbenzene	1.614	1.731	-7.2	85	0.00	8.70
119	1,2,4,5-tetramethylbenzen			-----NA-----			
120	1,2-dibromo-3-chloropropa	0.280	0.307	-9.6	88	0.00	9.46
121	1,3,5-trichlorobenzene	1.174	1.196	-1.9	84	0.00	9.64
122	1,2,4-trichlorobenzene	1.046	1.086	-3.8	85	0.00	10.26
123	hexachlorobutadiene	0.386	0.387	-0.3	84	0.00	10.42
124	naphthalene	3.412	3.466	-1.6	82	0.00	10.51
125	1,2,3-trichlorobenzene	0.993	1.048	-5.5	85	0.00	10.73
126	hexachloroethane	0.463	0.474	-2.4	84	0.00	8.95
127	Benzyl chloride	2.126	2.711	-27.5#	102	0.00	8.46
128	2-ethylhexyl acrylate	0.689	0.669	2.9	85	0.00	10.52
129	2-methylnaphthalene	1.333	1.315	1.4	80	0.00	11.60

(#= Out of Range

2V49941.D M2V1992.M

SPCC's out = 0 CCC's out = 0

Fri May 11 11:14:29 2018

6.9.6
6

Initial Calibration Summary

Page 1 of 5

Job Number: JC65632

Sample: V4B3370-ICC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81329.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
Last Update : Thu Apr 26 08:33:14 2018
Response via : Initial Calibration

Calibration Files

1	=4B81324.D	5	=4B81326.D	100	=4B81330.D	50	=4B81329.D
20	=4B81328.D	200	=4B81331.D	10	=4B81327.D	0.5	=4B81323.D
2	=4B81325.D		=				

Compound

	1	5	100	50	20	200	10	0.5	2	Avg	%RSD
<hr/>											
1) I tert butyl alcohol-d9							-----ISTD-----				
2) ethanol										0.000	-1.00
3) tertiary butyl alcohol	1.366	1.246	1.340	1.321	1.311	1.404	1.358		1.123	1.309	6.72
4) 1,4-dioxane	0.107	0.126	0.128	0.120	0.134	0.123			0.103	0.120	9.27
5) I pentafluorobenzene							-----ISTD-----				
6) chlorodifluoromethane	1.287	1.141	1.221	1.301	1.289	1.038	1.393	1.317	1.240	1.248	8.43
7) dichlorodifluoromethane	1.295	1.290	1.301	1.352	1.239	0.987	1.449	1.165	1.515	1.288	11.95
8) chloromethane	1.696	1.544	1.392	1.468	1.402	1.320	1.639	1.755	1.858	1.564	11.77
9) vinyl chloride	1.548	1.406	1.322	1.382	1.407	1.202	1.534	1.690	1.727	1.469	11.65
10) 1,3-butadiene	0.844	0.815	0.879	0.903	0.694	0.884				0.836	9.13
11) bromomethane	1.068	0.865	0.956	0.994			1.087			1.365	1.056
12) chloroethane	0.916	0.765	0.656	0.716	0.739		0.810			0.957	0.794
13) trichlorofluoromethane	1.544	1.337	1.283	1.335	1.323	1.097	1.457	1.531	1.606	1.390	11.43
14) vinyl bromide	1.086	0.921	0.861	0.898	0.887	0.813	0.964	1.028	1.057	0.946	9.91
15) ethyl ether	0.326	0.277	0.296	0.310	0.306	0.291	0.310	0.220	0.274	0.290	10.73
16) 2-chloropropane	1.301	1.055	1.037	1.120	1.124	0.918	1.215	1.326	1.158	1.139	11.38
17) acrolein	0.127	0.124	0.129	0.126	0.120	0.125			0.120	0.124	2.88
18) freon 113	0.648	0.553	0.663	0.690	0.662	0.514	0.742	0.567	0.628	0.630	11.50
19) 1,1-dichloroethene	1.110	0.949	0.961	1.063	1.084	0.860	1.107	1.167	1.057	1.040	9.33
20) acetone	0.044	0.047	0.046	0.048	0.048	0.044	0.049		0.047	0.047	4.16
21) acetonitrile	0.098	0.093	0.098	0.095	0.086	0.104				0.096	6.22
22) iodomethane	1.251	1.058	1.145	1.209	1.181	1.137	1.229	1.216	1.117	1.171	5.30
23) carbon disulfide											

6.6.7
6

Initial Calibration Summary

Page 2 of 5

Job Number: JC65632

Sample: V4B3370-ICC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81329.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	2.438	2.006	2.133	2.303	2.261	1.990	2.387	2.450	2.151	2.235	7.84
24)	methylene chloride										
	0.940	0.710	0.711	0.772	0.768	0.695	0.785		0.706	0.761	10.58
25)	methyl acetate										
	0.411	0.382	0.372	0.397	0.419	0.357	0.418		0.391	0.393	5.74
26)	methyl tert butyl ether										
	2.056	1.746	1.910	1.995	1.963	1.806	2.009	2.229	1.769	1.943	7.96
27)	trans-1,2-dichloroethene										
	0.980	0.846	0.830	0.929	0.926	0.759	0.997	1.050	0.912	0.914	9.92
28)	hexane										
	0.398	0.370	0.429	0.460	0.407	0.326	0.486	0.404	0.396	0.408	11.55
29)	di-isopropyl ether										
	2.337	2.055	2.162	2.341	2.314	2.016	2.340	2.537	2.090	2.244	7.66
30)	2-butanone										
	0.035	0.042	0.048	0.048	0.047	0.049	0.048		0.038	0.044	12.45
31)	1,1-dichloroethane										
	1.122	1.035	0.998	1.101	1.110	0.953	1.173	1.262	1.089	1.094	8.43
32)	chloroprene										
	0.763	0.701	0.754	0.804	0.781	0.729	0.810	0.799	0.707	0.761	5.43
33)	acrylonitrile										
	0.203	0.216	0.221	0.209	0.210	0.219			0.163	0.206	9.71
34)	vinyl acetate										
	0.057	0.073	0.074	0.069	0.076	0.070				0.070	9.80
35)	ethyl tert-butyl ether										
	2.090	1.856	2.093	2.196	2.106	2.014	2.129	2.299	1.867	2.072	6.92
36)	ethyl acetate										
	0.059	0.067	0.069	0.062	0.067	0.063				0.064	5.62
37)	2,2-dichloropropane										
	1.206	0.953	1.019	1.085	1.077	0.937	1.155	1.223	1.102	1.084	9.36
38)	cis-1,2-dichloroethene										
	0.674	0.607	0.621	0.663	0.656	0.612	0.680	0.699	0.615	0.647	5.27
39)	propionitrile										
	0.079	0.079	0.077	0.080	0.081	0.073	0.081	0.073	0.071	0.077	4.88
40)	methyl acrylate										
	0.053	0.063	0.063	0.062	0.062	0.057				0.060	6.70
41)	methacrylonitrile										
	0.156	0.178	0.180	0.175	0.183	0.174			0.142	0.170	8.91
42)	bromochloromethane										
	0.312	0.292	0.311	0.326	0.321	0.317	0.322	0.278	0.285	0.307	5.72
43)	tetrahydrofuran										
	0.044	0.065	0.063	0.063	0.063	0.060				0.060	12.87
44)	chloroform										
	1.110	0.934	0.945	1.009	0.993	0.940	1.019	1.069	0.954	0.997	6.17
45)	tert-butyl formate										
	0.593	0.514	0.637	0.646	0.613	0.626	0.605	0.542	0.528	0.589	8.34
46)	dibromofluoromethane (s)										
	0.450	0.447	0.445	0.451	0.447	0.446	0.446	0.453	0.449	0.448	0.61
47)	1,1,1-trichloroethane										
	1.153	0.941	1.082	1.129	1.089	1.024	1.129	1.148	1.008	1.078	6.75
48)	cyclohexane										
	1.500	1.133	1.081	1.105	1.075	0.908	1.138		1.130	1.134	14.61
49)	isobutyl alcohol										
										0.000	-1.00
50)	1,1-dichloropropene										
	0.670	0.607	0.606	0.656	0.656	0.596	0.708	0.706	0.627	0.648	6.49
51)	carbon tetrachloride										
	0.913	0.809	0.908	0.949	0.927	0.831	1.000	0.947	0.920	0.912	6.47
52)	tert-amyl alcohol										
	0.029	0.033	0.031	0.029	0.032	0.034				0.031	5.59
53)	isopropyl acetate										

Initial Calibration Summary

Page 3 of 5

Job Number: JC65632

Sample: V4B3370-ICC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81329.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	0.080	0.094	0.093	0.090	0.097	0.094		0.091	6.61
-----ISTD-----									
54) I 1,4-difluorobenzene									
55) 1,2-dichloroethane-d4 (s)	0.336	0.340	0.309	0.320	0.327	0.296	0.335	0.329	0.333
	0.325	4.42							
56) n-butyl alcohol	0.011	0.012	0.013	0.013	0.012	0.015		0.013	9.88
57) 2,2,4-trimethylpentane	1.864	1.672	2.011	2.138	1.811	1.545	2.137	1.768	1.868
								11.47	
58) benzene	1.709	1.481	1.542	1.626	1.617	1.519	1.660	1.764	1.517
								1.604	6.01
59) tert-amyl methyl ether	1.457	1.295	1.442	1.489	1.484	1.363	1.452	1.561	1.324
								1.430	6.00
60) heptane	0.314	0.282	0.334	0.354	0.310	0.257	0.366	0.342	0.294
								0.317	11.23
61) 1,2-dichloroethane	0.592	0.455	0.428	0.459	0.479	0.407	0.491	0.463	0.472
									11.77
62) ethyl acrylate	0.359	0.340	0.413	0.403	0.394	0.391	0.391	0.292	0.373
									10.82
63) trichloroethylene	0.384	0.356	0.376	0.395	0.392	0.369	0.399	0.413	0.367
								0.383	4.73
64) 2-chloroethyl vinyl ether	0.203	0.202	0.221	0.229	0.227	0.203	0.229	0.205	0.190
								0.212	6.87
65) methyl methacrylate	0.069	0.093	0.090	0.087	0.092	0.075		0.084	11.72
66) methylcyclohexane	0.867	0.801	0.993	1.043	0.962	0.785	1.062	1.016	0.923
								0.939	10.87
67) 1,2-dichloropropane	0.442	0.403	0.395	0.426	0.433	0.372	0.445	0.504	0.395
								0.424	9.12
68) dibromomethane	0.227	0.234	0.235	0.245	0.246	0.230	0.242	0.235	0.220
								0.235	3.64
69) bromodichloromethane	0.535	0.489	0.535	0.551	0.537	0.528	0.545	0.535	0.475
								0.526	4.91
70) 2-nitropropane	0.111	0.119	0.122	0.121	0.111	0.123		0.117	4.69
71) epichlorohydrin	0.033	0.037	0.036	0.035	0.036	0.035		0.029	0.035
									7.85
72) cis-1,3-dichloropropene	0.603	0.536	0.618	0.640	0.616	0.596	0.612	0.660	0.545
								0.603	6.68
73) 4-methyl-2-pentanone	0.150	0.141	0.149	0.154	0.154	0.136	0.156	0.141	0.135
								0.146	5.59
74) isoamyl alcohol	0.013	0.011	0.012	0.012	0.013	0.011	0.014	0.011	0.010
								0.012	8.63
75) I chlorobenzene-d5									
76) toluene-d8 (s)	1.189	1.189	1.240	1.221	1.199	1.289	1.202	1.173	1.199
								1.211	2.89
77) toluene	1.003	0.874	0.983	1.006	0.978	1.024	0.986	1.020	0.918
								0.977	5.10
78) ethyl methacrylate	0.383	0.391	0.484	0.478	0.453	0.500	0.434	0.351	0.434
									12.42
79) trans-1,3-dichloropropene	0.501	0.479	0.541	0.550	0.529	0.547	0.532	0.497	0.460
								0.515	6.25
80) 1,1,2-trichloroethane	0.293	0.271	0.303	0.303	0.301	0.312	0.299	0.276	0.262
								0.291	5.91
81) tetrachloroethene	0.383	0.335	0.376	0.384	0.374	0.380	0.388	0.354	0.346
								0.369	5.15
82) 2-hexanone	0.121	0.126	0.132	0.130	0.134	0.126	0.135	0.101	0.112
								0.124	9.11
83) 1,3-dichloropropene									

6.9.7
6

Initial Calibration Summary

Page 4 of 5

Job Number: JC65632

Sample: V4B3370-ICC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81329.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	0.595	0.515	0.527	0.543	0.548	0.528	0.553	0.528	0.521	0.540	4.51
84)	butyl acetate										
	0.223	0.239	0.237	0.240	0.240	0.242			0.198	0.231	6.95
85)	dibromochloromethane										
	0.400	0.368	0.448	0.443	0.422	0.478	0.401	0.365	0.356	0.409	10.29
86)	1,2-dibromoethane										
	0.395	0.347	0.411	0.402	0.387	0.432	0.382	0.394	0.356	0.389	6.69
87)	n-butyl ether										
	1.748	1.684	1.936	2.013	1.952	1.937	1.943	1.831	1.599	1.849	7.70
88)	chlorobenzene										
	1.167	1.020	1.104	1.132	1.104	1.136	1.143	1.140	1.052	1.111	4.24
89)	1,1,1,2-tetrachloroethane										
	0.492	0.427	0.505	0.512	0.498	0.527	0.499	0.474	0.449	0.487	6.48
90)	ethylbenzene										
	1.970	1.746	1.858	1.955	1.960	1.840	2.010	2.018	1.785	1.905	5.24
91)	m,p-xylene										
	0.760	0.686	0.745	0.769	0.755	0.761	0.776	0.758	0.684	0.744	4.62
92)	o-xylene										
	1.635	1.510	1.694	1.749	1.732	1.706	1.730	1.729	1.486	1.663	5.99
93)	styrene										
	1.117	1.117	1.234	1.278	1.273	1.251	1.256	1.152	1.012	1.188	7.78
94)	butyl acrylate										
	0.644	0.681	0.795	0.788	0.777	0.818	0.752		0.591	0.731	11.25
95)	isopropylbenzene										
	2.013	1.906	2.312	2.380	2.267	2.340	2.271	2.136	1.930	2.173	8.38
96)	bromoform										
	0.251	0.255	0.328	0.315	0.289	0.353	0.279	0.279	0.246	0.288	12.88
97)	cis-1,4-dichloro-2-butene										
	0.067	0.115	0.104	0.080	0.133	0.081				0.097	25.90
	----- Linear regression ----- Coefficient = 0.9902										
	Response Ratio = -0.00947 + 0.12706 *A										
98)	I 1,4-dichlorobenzene-d										
99)	4-bromofluorobenzene (s)										
	0.718	0.714	0.750	0.758	0.732	0.721	0.715	0.710	0.716	0.726	2.35
100)	1,1,2,2-tetrachloroethane										
	0.841	0.763	0.881	0.885	0.842	0.829	0.827	0.834	0.734	0.826	5.98
101)	trans-1,4-dichloro-2-butene										
	0.089	0.146	0.135	0.111	0.149	0.111				0.124	19.30
102)	1,2,3-trichloropropane										
	0.186	0.200	0.215	0.212	0.212	0.200	0.211		0.201	0.204	4.79
103)	bromobenzene										
	0.865	0.792	0.886	0.918	0.889	0.841	0.911	0.924	0.774	0.867	6.28
104)	n-propylbenzene										
	3.739	3.399	3.763	4.036	3.932	3.458	4.006	3.756	3.508	3.733	6.32
105)	2-chlorotoluene										
	0.818	0.724	0.850	0.883	0.842	0.816	0.842	0.844	0.745	0.818	6.29
106)	4-chlorotoluene										
	2.186	2.037	2.157	2.294	2.231	2.084	2.239	2.232	2.065	2.169	4.13
107)	4-ethyltoluene										
										0.000	-1.00
108)	1,3,5-trimethylbenzene										
	2.670	2.472	2.957	3.090	2.987	2.774	2.948	2.759	2.519	2.797	7.71
109)	tert-butylbenzene										
	1.956	2.761	2.766	2.508	2.673	2.404			2.043	2.444	13.58
110)	1,2,4-trimethylbenzene										
	2.615	2.617	2.975	3.159	3.058	2.835	3.041	2.548	2.548	2.822	8.65
111)	sec-butylbenzene										
	3.428	3.334	4.320	4.405	4.129	4.016	4.048	3.402	3.443	3.836	11.22

Initial Calibration Summary

Page 5 of 5

Job Number: JC65632

Sample: V4B3370-ICC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81329.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

112)	p-isopropyltoluene	2.959	2.886	3.628	3.756	3.520	3.428	3.510	2.970	2.809	3.274	11.10
113)	1,3-dichlorobenzene	1.791	1.649	1.698	1.796	1.777	1.665	1.837	1.842	1.692	1.750	4.24
114)	1,4-dichlorobenzene	1.863	1.615	1.713	1.768	1.760	1.712	1.802	1.991	1.634	1.762	6.56
115)	1,2-dichlorobenzene	1.921	1.731	1.875	1.953	1.937	1.827	1.946	2.004	1.752	1.883	5.02
116)	benzyl chloride	1.638	1.480	1.722	1.732	1.654	1.702	1.630	1.653	1.401	1.624	6.87
117)	1,4-diethylbenzene									0.000	-1.00	6.97
118)	n-butylbenzene	1.490	1.510	1.840	1.925	1.868	1.772	1.881	1.504	1.478	1.696	11.50
119)	1,2,4,5-tetramethylbenzene									0.000	-1.00	6
120)	hexachloroethane	0.486	0.743	0.697	0.599	0.783	0.581			0.478	0.624	19.36
121)	1,2-dibromo-3-chloropropane	0.214	0.207	0.274	0.254	0.234	0.279	0.230		0.187	0.235	13.84
122)	1,3,5-trichlorobenzene	1.941	1.762	2.154	2.206	2.118	2.060	2.091	2.041	1.810	2.020	7.55
123)	1,2,4-trichlorobenzene	1.625	1.450	1.996	2.020	1.892	1.816	1.814	1.706	1.462	1.753	11.98
124)	2-ethylhexyl acrylate	0.520	1.162	1.043	0.786	1.099	0.621				0.872	30.75
		----- Linear regression ----- Coefficient = 0.9981										
		Response Ratio = -0.01570 + 1.13300 *A										
125)	hexachlorobutadiene	0.829	0.726	0.893	0.917	0.875	0.826	0.896	0.869	0.765	0.844	7.60
126)	naphthalene	2.659	3.912	3.866	3.569	3.512	3.288				3.468	13.24
127)	1,2,3-trichlorobenzene	1.474	1.298	1.849	1.872	1.723	1.639	1.622	1.476	1.348	1.589	12.92
128)	2-methylnaphthalene	2.133	1.977	1.575	1.980	1.280					1.789	19.67

(##) = Out of Range ### Number of calibration levels exceeded format ###

M4B3370.M

Thu Apr 26 08:35:58 2018

GCMS4B

Initial Calibration Verification

Page 1 of 3

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81334.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\V4B3370\4B81334.D Vial: 15
 Acq On : 25 Apr 2018 10:03 pm Operator: HueanhT
 Sample : ICV3370-50 Inst : MS4B
 Misc : MS25764,V4B3370,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I tert butyl alcohol-d9	1.000	1.000	0.0	98	0.00	6.77
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.309	1.357	-3.7	101	0.00	6.88
4	1,4-dioxane	0.120	0.135	-12.5	104	0.00	10.26
5	I pentafluorobenzene	1.000	1.000	0.0	103	0.00	8.77
6	chlorodifluoromethane			-----NA-----			
7	dichlorodifluoromethane	1.288	1.249	3.0	95	0.00	3.90
8	chloromethane	1.564	1.469	6.1	103	0.00	4.25
9	vinyl chloride	1.469	1.306	11.1	98	0.00	4.46
10	1,3-butadiene	0.836	0.940	-12.4	111	0.00	4.47
11	bromomethane	1.056	0.963	8.8	104	0.00	4.99
12	chloroethane	0.794	0.795	-0.1	115	0.00	5.13
13	trichlorofluoromethane	1.390	1.231	11.4	95	0.00	5.53
14	vinyl bromide	0.946	0.887	6.2	102	0.00	5.43
15	ethyl ether	0.290	0.278	4.1	93	0.00	5.82
16	2-chloropropane	1.139	1.016	10.8	94	0.00	6.03
17	acrolein	0.124	0.126	-1.6	101	0.00	6.03
18	freon 113	0.630	0.632	-0.3	95	0.00	6.23
19	1,1-dichloroethene	1.040	0.859	17.4	84	0.00	6.20
20	acetone	0.047	0.046	2.1	99	0.00	6.20
21	acetonitrile			-----NA-----			
22	iodomethane	1.171	1.277	-9.1	109	0.00	6.43
23	carbon disulfide	2.235	2.297	-2.8	103	0.00	6.57
24	methylene chloride	0.761	0.705	7.4	94	0.00	6.82
25	methyl acetate	0.393	0.340	13.5	88	0.00	6.57
26	methyl tert butyl ether	1.943	1.819	6.4	94	0.00	7.12
27	trans-1,2-dichloroethene	0.914	0.806	11.8	90	0.00	7.16
28	hexane	0.408	0.377	7.6	85	0.00	7.45
29	di-isopropyl ether	2.244	2.165	3.5	96	0.00	7.64
30	2-butanone	0.044	0.048	-9.1	102	0.00	8.22
31	1,1-dichloroethane	1.094	1.023	6.5	96	0.00	7.66
32	chloroprene	0.761	0.766	-0.7	99	0.00	7.75
33	acrylonitrile	0.206	0.234	-13.6	109	0.00	7.07
34	vinyl acetate	0.070	0.074	-5.7	103	0.00	7.59
35	ethyl tert-butyl ether	2.072	2.075	-0.1	98	0.00	8.05
36	ethyl acetate	0.064	0.060	6.3	90	0.00	8.23
37	2,2-dichloropropane	1.084	1.010	6.8	96	0.00	8.34
38	cis-1,2-dichloroethene	0.647	0.662	-2.3	103	0.00	8.30
39	propionitrile	0.077	0.076	1.3	99	0.00	8.30
40	methyl acrylate	0.060	0.061	-1.7	101	0.00	8.31
41	methacrylonitrile	0.170	0.176	-3.5	101	0.00	8.47

6.9.8
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Initial Calibration Verification

Page 2 of 3

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81334.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	bromochloromethane	0.307	0.322	-4.9	102	0.00	8.57
43	tetrahydrofuran	0.060	0.059	1.7	96	0.00	8.58
44	chloroform	0.997	0.995	0.2	102	0.00	8.64
45	tert-butyl formate	0.589	0.442	25.0	71	0.00	8.68
46 S	dibromofluoromethane (s)	0.448	0.435	2.9	100	0.00	8.82
47	1,1,1-trichloroethane	1.078	1.062	1.5	97	0.00	8.90
48	cyclohexane	1.134	1.089	4.0	102	0.00	9.01
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.648	0.642	0.9	101	0.00	9.04
51	carbon tetrachloride	0.912	0.888	2.6	97	0.00	9.08
52	tert-amyl alcohol	0.031	0.032	-3.2	107	-0.01	9.14
53	isopropyl acetate	0.091	0.091	0.0	102	0.00	9.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	9.64
55 S	1,2-dichloroethane-d4 (s)	0.325	0.304	6.5	96	0.00	9.21
56	n-butyl alcohol	0.013	0.013	0.0	101	0.00	9.67
57	2,2,4-trimethylpentane	1.868	1.929	-3.3	91	0.00	9.35
58	benzene	1.604	1.650	-2.9	103	0.00	9.27
59	tert-amyl methyl ether	1.430	1.474	-3.1	100	0.00	9.34
60	heptane	0.317	0.352	-11.0	101	0.00	9.49
61	1,2-dichloroethane	0.472	0.450	4.7	99	0.00	9.29
62	ethyl acrylate	0.373	0.416	-11.5	105	0.00	9.91
63	trichloroethene	0.383	0.415	-8.4	106	0.00	9.94
64	2-chloroethyl vinyl ether	0.212	0.229	-8.0	101	0.00	10.70
65	methyl methacrylate	0.084	0.092	-9.5	103	0.00	10.17
66	methylcyclohexane	0.939	0.956	-1.8	93	0.00	10.24
67	1,2-dichloropropane	0.424	0.418	1.4	99	0.00	10.22
68	dibromomethane	0.235	0.251	-6.8	104	0.00	10.33
69	bromodichloromethane	0.526	0.537	-2.1	99	0.00	10.47
70	2-nitropropane	0.117	0.123	-5.1	102	0.00	10.67
71	epichlorohydrin	0.035	0.036	-2.9	101	0.00	10.79
72	cis-1,3-dichloropropene	0.603	0.644	-6.8	102	0.00	10.92
73	4-methyl-2-pentanone	0.146	0.151	-3.4	100	0.00	11.02
74	isoamyl alcohol	0.012	0.013	-8.3	103	0.00	11.01
75 I	chlorobenzene-d5	1.000	1.000	0.0	100	0.00	12.83
76 S	toluene-d8 (s)	1.211	1.210	0.1	99	0.00	11.24
77	toluene	0.977	1.057	-8.2	105	0.00	11.31
78	ethyl methacrylate	0.434	0.469	-8.1	98	0.00	11.48
79	trans-1,3-dichloropropene	0.515	0.528	-2.5	96	0.00	11.50
80	1,1,2-trichloroethane	0.291	0.311	-6.9	103	0.00	11.73
81	tetrachloroethene			-----NA-----			
82	2-hexanone	0.124	0.133	-7.3	102	0.00	11.90
83	1,3-dichloropropane	0.540	0.557	-3.1	103	0.00	11.92
84	butyl acetate	0.231	0.247	-6.9	104	0.00	11.97
85	dibromochloromethane	0.409	0.449	-9.8	101	0.00	12.19
86	1,2-dibromoethane	0.389	0.417	-7.2	104	0.00	12.36
87	n-butyl ether	1.849	2.020	-9.2	101	0.00	12.81
88	chlorobenzene	1.111	1.191	-7.2	105	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.487	0.542	-11.3	106	0.00	12.94
90	ethylbenzene	1.905	2.050	-7.6	105	0.00	12.93
91	m,p-xylene	0.744	0.811	-9.0	106	0.00	13.06
92	o-xylene	1.663	1.823	-9.6	105	0.00	13.50
93	styrene	1.188	1.358	-14.3	106	0.00	13.51
94	butyl acrylate	0.731	0.799	-9.3	102	0.00	13.30
95	isopropylbenzene	2.173	2.499	-15.0	105	0.00	13.88
96	bromoform	0.288	0.321	-11.5	102	0.00	13.77
97	cis-1,4-dichloro-2-butene	50.000	42.019	True Calc. % Drift 16.0 94 0.00	----- ----- ----- 13.92		

6.9.8
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Initial Calibration Verification

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81334.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

		AvgRF	CCRF	% Dev			
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00 15.40
99	S	4-bromofluorobenzene (s)	0.726	0.739	-1.8	99	0.00 14.10
100		1,1,2,2-tetrachloroethane	0.826	0.886	-7.3	101	0.00 14.19
101		trans-1,4-dichloro-2-bute	0.124	0.140	-12.9	105	0.00 14.22
102		1,2,3-trichloropropane	0.204	0.218	-6.9	104	0.00 14.29
103		bromobenzene	0.867	0.972	-12.1	107	0.00 14.31
104		n-propylbenzene	3.733	4.206	-12.7	105	0.00 14.34
105		2-chlorotoluene	0.818	0.910	-11.2	104	0.00 14.48
106		4-chlorotoluene	2.169	2.440	-12.5	108	0.00 14.61
107		4-ethyltoluene			-----NA-----		
108		1,3,5-trimethylbenzene	2.797	3.218	-15.1	105	0.00 14.51
109		tert-butylbenzene	2.444	2.937	-20.2	107	0.00 14.89
110		1,2,4-trimethylbenzene	2.822	3.342	-18.4	107	0.00 14.94
111		sec-butylbenzene	3.836	4.689	-22.2	108	0.00 15.13
112		p-isopropyltoluene	3.274	4.005	-22.3	108	0.00 15.28
113		1,3-dichlorobenzene	1.750	1.887	-7.8	106	0.00 15.33
114		1,4-dichlorobenzene	1.762	1.886	-7.0	108	0.00 15.43
115		1,2-dichlorobenzene	1.883	2.047	-8.7	106	0.00 15.84
116		benzyl chloride	1.624	1.398	13.9	82	0.00 15.53
117		1,4-diethylbenzene			-----NA-----		
118		n-butylbenzene	1.696	2.031	-19.8	107	0.00 15.73
119		1,2,4,5-tetramethylbenzen			-----NA-----		
120		hexachloroethane	0.624	0.759	-21.6	110	0.00 16.17
121		1,2-dibromo-3-chloropropa	0.235	0.261	-11.1	104	0.00 16.69
122		1,3,5-trichlorobenzene	2.020	2.315	-14.6	106	0.00 16.89
123		1,2,4-trichlorobenzene	1.753	2.114	-20.6	106	0.00 17.57
		-----True-----	-----Calc.-----	% Drift			
124		2-ethylhexyl acrylate	10.000	11.127	-11.3	115	0.00 17.58
		-----AvgRF-----	-----CCRF-----	% Dev			
125		hexachlorobutadiene	0.844	0.964	-14.2	106	0.00 17.69
126		naphthalene	3.468	4.019	-15.9	105	0.00 17.88
127		1,2,3-trichlorobenzene	1.589	1.927	-21.3	104	0.00 18.12
128		2-methylnaphthalene	1.789	1.899	-6.1	97	0.00 19.17

(#= Out of Range
4B81329.D M4B3370.MSPCC's out = 0 CCC's out = 0
Thu Apr 26 08:35:59 2018 GCMS4B6.9.8
6

Initial Calibration Verification

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81335.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\V4B3370\4B81335.D Vial: 16
 Acq On : 25 Apr 2018 10:31 pm Operator: HueanhT
 Sample : ICV3370-50 Inst : MS4B
 Misc : MS25764,V4B3370,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I tert butyl alcohol-d9	1.000	1.000	0.0	110	0.00	6.77
2	ethanol		-----NA-----				
3	tertiary butyl alcohol		-----NA-----				
4	1,4-dioxane		-----NA-----				
5	I pentafluorobenzene	1.000	1.000	0.0	105	0.00	8.77
6	chlorodifluoromethane	1.248	1.113	10.8	90	0.00	3.91
7	dichlorodifluoromethane		-----NA-----				
8	chloromethane		-----NA-----				
9	vinyl chloride		-----NA-----				
10	1,3-butadiene		-----NA-----				
11	bromomethane		-----NA-----				
12	chloroethane		-----NA-----				
13	trichlorofluoromethane		-----NA-----				
14	vinyl bromide		-----NA-----				
15	ethyl ether		-----NA-----				
16	2-chloropropane		-----NA-----				
17	acrolein		-----NA-----				
18	freon 113		-----NA-----				
19	1,1-dichloroethene		-----NA-----				
20	acetone		-----NA-----				
21	acetonitrile	0.096	0.101	-5.2	108	0.00	6.57
22	iodomethane		-----NA-----				
23	carbon disulfide		-----NA-----				
24	methylene chloride		-----NA-----				
25	methyl acetate		-----NA-----				
26	methyl tert butyl ether		-----NA-----				
27	trans-1,2-dichloroethene		-----NA-----				
28	hexane		-----NA-----				
29	di-isopropyl ether		-----NA-----				
30	2-butanone		-----NA-----				
31	1,1-dichloroethane		-----NA-----				
32	chloroprene		-----NA-----				
33	acrylonitrile		-----NA-----				
34	vinyl acetate		-----NA-----				
35	ethyl tert-butyl ether		-----NA-----				
36	ethyl acetate		-----NA-----				
37	2,2-dichloropropane		-----NA-----				
38	cis-1,2-dichloroethene		-----NA-----				
39	propionitrile		-----NA-----				
40	methyl acrylate		-----NA-----				
41	methacrylonitrile		-----NA-----				

Initial Calibration Verification

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81335.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

42	bromochloromethane		-----	-NA-----						
43	tetrahydrofuran		-----	-NA-----						
44	chloroform		-----	-NA-----						
45	tert-butyl formate		-----	-NA-----						
46 S	dibromofluoromethane (s)	0.448	0.430	4.0	100	0.00				8.82
47	1,1,1-trichloroethane		-----	-NA-----						
48	cyclohexane		-----	-NA-----						
49	isobutyl alcohol		-----	-NA-----						
50	1,1-dichloropropene		-----	-NA-----						
51	carbon tetrachloride		-----	-NA-----						
52	tert-amyl alcohol		-----	-NA-----						
53	isopropyl acetate		-----	-NA-----						
54 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00				9.65
55 S	1,2-dichloroethane-d4 (s)	0.325	0.310	4.6	101	0.00				9.21
56	n-butyl alcohol		-----	-NA-----						
57	2,2,4-trimethylpentane		-----	-NA-----						
58	benzene		-----	-NA-----						
59	tert-amyl methyl ether		-----	-NA-----						
60	heptane		-----	-NA-----						
61	1,2-dichloroethane		-----	-NA-----						
62	ethyl acrylate		-----	-NA-----						
63	trichloroethene		-----	-NA-----						
64	2-chloroethyl vinyl ether		-----	-NA-----						
65	methyl methacrylate		-----	-NA-----						
66	methylcyclohexane		-----	-NA-----						
67	1,2-dichloropropane		-----	-NA-----						
68	dibromomethane		-----	-NA-----						
69	bromodichloromethane		-----	-NA-----						
70	2-nitropropane		-----	-NA-----						
71	epichlorohydrin		-----	-NA-----						
72	cis-1,3-dichloropropene		-----	-NA-----						
73	4-methyl-2-pentanone		-----	-NA-----						
74	isoamyl alcohol		-----	-NA-----						
75 I	chlorobenzene-d5	1.000	1.000	0.0	104	0.00				12.83
76 S	toluene-d8 (s)	1.211	1.180	2.6	101	0.00				11.24
77	toluene		-----	-NA-----						
78	ethyl methacrylate		-----	-NA-----						
79	trans-1,3-dichloropropene		-----	-NA-----						
80	1,1,2-trichloroethane		-----	-NA-----						
81	tetrachloroethene	0.369	0.390	-5.7	106	0.00				11.89
82	2-hexanone		-----	-NA-----						
83	1,3-dichloropropane		-----	-NA-----						
84	butyl acetate		-----	-NA-----						
85	dibromochloromethane		-----	-NA-----						
86	1,2-dibromoethane		-----	-NA-----						
87	n-butyl ether		-----	-NA-----						
88	chlorobenzene		-----	-NA-----						
89	1,1,1,2-tetrachloroethane		-----	-NA-----						
90	ethylbenzene		-----	-NA-----						
91	m,p-xylene		-----	-NA-----						
92	o-xylene		-----	-NA-----						
93	styrene		-----	-NA-----						
94	butyl acrylate		-----	-NA-----						
95	isopropylbenzene		-----	-NA-----						
96	bromoform		-----	-NA-----						
		-----	True	Calc.	% Drift	-----				
97	cis-1,4-dichloro-2-butene		-----	-NA-----						

6.6.9
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Initial Calibration Verification

Page 3 of 3

Job Number: JC65632

Sample: V4B3370-ICV3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81335.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

		AvgRF	CCRF	% Dev				
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	110	0.00	15.40
99	S	4-bromofluorobenzene (s)	0.726	0.699	3.7	102	0.00	14.10
100		1,1,2,2-tetrachloroethane		-----NA-----				
101		trans-1,4-dichloro-2-bute		-----NA-----				
102		1,2,3-trichloropropane		-----NA-----				
103		bromobenzene		-----NA-----				
104		n-propylbenzene		-----NA-----				
105		2-chlorotoluene		-----NA-----				
106		4-chlorotoluene		-----NA-----				
107		4-ethyltoluene		-----NA-----				
108		1,3,5-trimethylbenzene		-----NA-----				
109		tert-butylbenzene		-----NA-----				
110		1,2,4-trimethylbenzene		-----NA-----				
111		sec-butylbenzene		-----NA-----				
112		p-isopropyltoluene		-----NA-----				
113		1,3-dichlorobenzene		-----NA-----				
114		1,4-dichlorobenzene		-----NA-----				
115		1,2-dichlorobenzene		-----NA-----				
116		benzyl chloride		-----NA-----				
117		1,4-diethylbenzene		-----NA-----				
118		n-butylbenzene		-----NA-----				
119		1,2,4,5-tetramethylbenzen		-----NA-----				
120		hexachloroethane		-----NA-----				
121		1,2-dibromo-3-chloropropa		-----NA-----				
122		1,3,5-trichlorobenzene		-----NA-----				
123		1,2,4-trichlorobenzene		-----NA-----				
124		2-ethylhexyl acrylate	True	Calc.	% Drift			
125		hexachlorobutadiene	AvgRF	CCRF	% Dev			
126		naphthalene		-----NA-----				
127		1,2,3-trichlorobenzene		-----NA-----				
128		2-methylnaphthalene		-----NA-----				

(#= Out of Range
4B81329.D M4B3370.MSPCC's out = 0 CCC's out = 0
Thu Apr 26 08:35:59 2018 GCMS4B6.6.9
6

Continuing Calibration Summary

Page 1 of 3

Job Number: JC65632

Sample: V4B3388-CC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81664.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...-18\v4b3388\4b81664.d Vial: 1
 Acq On : 8 May 2018 7:05 pm Operator: HueanhT
 Sample : cc3370-50 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 26 08:33:14 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I tert butyl alcohol-d9	1.000	1.000	0.0	91	0.02	6.79
2	ethanol			-----NA-----			
3	tertiary butyl alcohol	1.309	1.289	1.5	89	-0.01	6.88
4	1,4-dioxane	0.120	0.116	3.3	82	0.00	10.26
5	I pentafluorobenzene	1.000	1.000	0.0	94	0.00	8.77
6	chlorodifluoromethane	1.248	1.010	19.1	73	0.00	3.91
7	dichlorodifluoromethane	1.288	1.410	-9.5	98	0.00	3.90
8	chloromethane	1.564	1.767	-13.0	114	0.00	4.25
9	vinyl chloride	1.469	1.427	2.9	97	0.00	4.46
10	1,3-butadiene			-----NA-----			
11	bromomethane	1.056	0.982	7.0	97	0.00	4.99
12	chloroethane	0.794	0.749	5.7	99	0.00	5.13
13	trichlorofluoromethane	1.390	1.333	4.1	94	0.00	5.54
14	vinyl bromide	0.946	0.957	-1.2	101	0.00	5.43
15	ethyl ether	0.290	0.301	-3.8	92	0.00	5.82
16	2-chloropropane	1.139	1.217	-6.8	102	0.00	6.03
17	acrolein	0.124	0.131	-5.6	95	0.00	6.03
18	freon 113	0.630	0.710	-12.7	97	0.00	6.23
19	1,1-dichloroethene	1.040	1.105	-6.2	98	0.00	6.20
20	acetone	0.047	0.050	-6.4	97	0.00	6.20
21	acetonitrile	0.096	0.094	2.1	91	-0.01	6.57
22	iodomethane	1.171	1.193	-1.9	93	0.00	6.43
23	carbon disulfide	2.235	2.348	-5.1	96	0.00	6.57
24	methylene chloride	0.761	0.775	-1.8	95	0.00	6.82
25	methyl acetate	0.393	0.397	-1.0	94	0.00	6.58
26	methyl tert butyl ether	1.943	1.963	-1.0	93	-0.01	7.11
27	trans-1,2-dichloroethene	0.914	0.947	-3.6	96	0.00	7.16
28	hexane	0.408	0.756	-85.3#	155	0.00	7.45
29	di-isopropyl ether	2.244	2.323	-3.5	94	0.00	7.64
30	2-butanone	0.044	0.047	-6.8	92	0.00	8.23
31	1,1-dichloroethane	1.094	1.124	-2.7	96	0.00	7.66
32	chloroprene	0.761	0.814	-7.0	96	0.00	7.75
33	acrylonitrile	0.206	0.226	-9.7	96	-0.01	7.06
34	vinyl acetate	0.070	0.068	2.9	87	0.00	7.59
35	ethyl tert-butyl ether	2.072	2.125	-2.6	91	0.00	8.05
36	ethyl acetate	0.064	0.063	1.6	86	0.00	8.23
37	2,2-dichloropropane	1.084	1.119	-3.2	97	0.00	8.34
38	cis-1,2-dichloroethene	0.647	0.663	-2.5	94	0.00	8.30
39	propionitrile	0.077	0.079	-2.6	93	0.00	8.30
40	methyl acrylate	0.060	0.063	-5.0	95	0.00	8.31
41	methacrylonitrile	0.170	0.176	-3.5	92	0.00	8.47

6.9.10
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Continuing Calibration Summary

Page 2 of 3

Job Number: JC65632

Sample: V4B3388-CC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81664.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

42	bromochloromethane	0.307	0.323	-5.2	93	0.00	8.57
43	tetrahydrofuran	0.060	0.062	-3.3	93	0.00	8.58
44	chloroform	0.997	1.034	-3.7	97	0.00	8.64
45	tert-butyl formate	0.589	0.608	-3.2	89	0.00	8.68
46 S	dibromofluoromethane (s)	0.448	0.474	-5.8	99	0.00	8.82
47	1,1,1-trichloroethane	1.078	1.189	-10.3	99	0.00	8.90
48	cyclohexane	1.134	1.149	-1.3	98	0.00	9.00
49	isobutyl alcohol			-----NA-----			
50	1,1-dichloropropene	0.648	0.678	-4.6	97	0.00	9.04
51	carbon tetrachloride	0.912	1.008	-10.5	100	0.00	9.08
52	tert-amyl alcohol	0.031	0.029	6.5	88	0.00	9.15
53	isopropyl acetate	0.091	0.091	0.0	93	0.00	9.16
54 I	1,4-difluorobenzene	1.000	1.000	0.0	97	0.00	9.64
55 S	1,2-dichloroethane-d4 (s)	0.325	0.333	-2.5	101	0.00	9.21
56	n-butyl alcohol	0.013	0.012	7.7	94	0.00	9.67
57	2,2,4-trimethylpentane	1.868	1.869	-0.1	85	0.00	9.35
58	benzene	1.604	1.633	-1.8	98	0.00	9.27
59	tert-amyl methyl ether	1.430	1.407	1.6	92	0.00	9.34
60	heptane	0.317	0.310	2.2	85	0.00	9.49
61	1,2-dichloroethane	0.472	0.468	0.8	99	0.00	9.29
62	ethyl acrylate	0.373	0.379	-1.6	91	0.00	9.91
63	trichloroethene	0.383	0.402	-5.0	99	0.00	9.94
64	2-chloroethyl vinyl ether	0.212	0.215	-1.4	91	0.00	10.70
65	methyl methacrylate	0.084	0.083	1.2	89	0.00	10.17
66	methylcyclohexane	0.939	0.991	-5.5	92	0.00	10.24
67	1,2-dichloropropane	0.424	0.432	-1.9	99	0.00	10.22
68	dibromomethane	0.235	0.244	-3.8	97	0.00	10.33
69	bromodichloromethane	0.526	0.553	-5.1	98	0.00	10.47
70	2-nitropropane	0.117	0.120	-2.6	96	0.00	10.67
71	epichlorohydrin	0.035	0.034	2.9	90	0.00	10.79
72	cis-1,3-dichloropropene	0.603	0.618	-2.5	94	0.00	10.92
73	4-methyl-2-pentanone	0.146	0.151	-3.4	96	0.00	11.02
74	isoamyl alcohol	0.012	0.012	0.0	94	0.00	11.02
75 I	chlorobenzene-d5	1.000	1.000	0.0	98	0.00	12.83
76 S	toluene-d8 (s)	1.211	1.217	-0.5	98	0.00	11.24
77	toluene	0.977	0.988	-1.1	97	0.00	11.31
78	ethyl methacrylate	0.434	0.452	-4.1	93	0.00	11.48
79	trans-1,3-dichloropropene	0.515	0.539	-4.7	96	0.00	11.50
80	1,1,2-trichloroethane	0.291	0.298	-2.4	97	0.00	11.73
81	tetrachloroethene	0.369	0.378	-2.4	97	0.00	11.89
82	2-hexanone	0.124	0.126	-1.6	95	0.00	11.90
83	1,3-dichloropropane	0.540	0.535	0.9	97	0.00	11.92
84	butyl acetate	0.231	0.227	1.7	94	0.00	11.97
85	dibromochloromethane	0.409	0.432	-5.6	96	0.00	12.19
86	1,2-dibromoethane	0.389	0.387	0.5	95	0.00	12.35
87	n-butyl ether	1.849	1.927	-4.2	94	0.00	12.81
88	chlorobenzene	1.111	1.104	0.6	96	0.00	12.86
89	1,1,1,2-tetrachloroethane	0.487	0.503	-3.3	97	0.00	12.94
90	ethylbenzene	1.905	1.943	-2.0	98	0.00	12.93
91	m,p-xylene	0.744	0.759	-2.0	97	0.00	13.06
92	o-xylene	1.663	1.747	-5.1	98	0.00	13.50
93	styrene	1.188	1.271	-7.0	98	0.00	13.51
94	butyl acrylate	0.731	0.748	-2.3	93	0.00	13.30
95	isopropylbenzene	2.173	2.341	-7.7	97	0.00	13.88
96	bromoform	0.288	0.316	-9.7	99	0.00	13.76
		-----	True	Calc.	% Drift	-----	
97	cis-1,4-dichloro-2-butene	50.000	50.668	-1.3	113	0.00	13.92

6.9.10
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Continuing Calibration Summary

Job Number: JC65632

Sample: V4B3388-CC3370

Account: UTC United Technologies Corporation

Lab FileID: 4B81664.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

		AvgRF	CCRF	% Dev				
98	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	15.40
99	S	4-bromofluorobenzene (s)	0.726	0.737	-1.5	99	0.00	14.10
100		1,1,2,2-tetrachloroethane	0.826	0.862	-4.4	99	0.00	14.19
101		trans-1,4-dichloro-2-bute	0.124	0.148	-19.4	111	0.00	14.22
102		1,2,3-trichloropropane	0.204	0.208	-2.0	99	0.00	14.29
103		bromobenzene	0.867	0.891	-2.8	98	0.00	14.31
104		n-propylbenzene	3.733	3.942	-5.6	99	0.00	14.34
105		2-chlorotoluene	0.818	0.850	-3.9	98	0.00	14.48
106		4-chlorotoluene	2.169	2.227	-2.7	98	0.00	14.61
107		4-ethyltoluene			NA			
108		1,3,5-trimethylbenzene	2.797	2.998	-7.2	98	0.00	14.51
109		tert-butylbenzene	2.444	2.625	-7.4	96	0.00	14.89
110		1,2,4-trimethylbenzene	2.822	3.043	-7.8	98	0.00	14.94
111		sec-butylbenzene	3.836	4.276	-11.5	98	0.00	15.13
112		p-isopropyltoluene	3.274	3.597	-9.9	97	0.00	15.28
113		1,3-dichlorobenzene	1.750	1.751	-0.1	99	0.00	15.32
114		1,4-dichlorobenzene	1.762	1.746	0.9	100	0.00	15.43
115		1,2-dichlorobenzene	1.883	1.902	-1.0	99	0.00	15.84
116		benzyl chloride	1.624	1.526	6.0	89	0.00	15.53
117		1,4-diethylbenzene			NA			
118		n-butylbenzene	1.696	1.855	-9.4	98	0.00	15.73
119		1,2,4,5-tetramethylbenzen			NA			
120		hexachloroethane	0.624	0.683	-9.5	99	0.00	16.17
121		1,2-dibromo-3-chloropropa	0.235	0.241	-2.6	96	0.00	16.69
122		1,3,5-trichlorobenzene	2.020	2.050	-1.5	94	0.00	16.89
123		1,2,4-trichlorobenzene	1.753	1.835	-4.7	92	0.00	17.57
			True	Calc.	% Drift			
124		2-ethylhexyl acrylate	10.000	6.208	37.9#	61	0.00	17.58
			AvgRF	CCRF	% Dev			
125		hexachlorobutadiene	0.844	0.860	-1.9	95	0.00	17.68
126		naphthalene	3.468	3.357	3.2	88	0.00	17.88
127		1,2,3-trichlorobenzene	1.589	1.683	-5.9	91	0.00	18.11
128		2-methylnaphthalene	1.789	1.321	26.2#	68	0.00	19.17
129		Bis(chloromethyl)ether	N/A	1.00	0.0	0#	0.00	0.00
130		Ethylenimine	N/A	1.00	0.0	0#	0.00	0.00

(#) = Out of Range
4B81329.D M4B3370.MSPCC's out = 0 CCC's out = 0
Wed May 09 23:56:33 20186.9.10
6

Initial Calibration Summary

Page 1 of 5

Job Number: JC65632

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report MSA

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)

Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

Last Update : Thu Apr 05 12:19:04 2018

Response via : Initial Calibration

Calibration Files

5 =A240806.D	2 =A240805.D	20 =A240808.D	50 =A240809.D
100 =A240810.D	1 =A240804.D	200 =A240811.D	0.5 =A240803.D
10 =A240807.D	0.2 =A240802.D	=	=

Compound

	5	2	20	50	100	1	200	0.5	10	0.2	Avg	%RSD
--	---	---	----	----	-----	---	-----	-----	----	-----	-----	------

1) I Tert Butyl Alcohol-d9	-----	ISTD	-----									
2) ethanol											0.000#	-1.00
3) tertiary butyl alcohol	0.880	0.876	0.899	0.874	0.887	0.891	0.857		0.923	0.886	2.21	
4) 1,4-dioxane	0.060		0.052	0.055	0.057		0.057		0.053	0.056	5.00	
5) I pentafluorobenzene								ISTD				
6) chlorodifluoromethane	0.798	0.787	0.773	0.755	0.738		0.743	0.799	0.771	0.771	3.31	
7) dichlorodifluoromethane	0.850	0.932	0.852	0.867	0.801	0.773	0.806		0.867	0.844	5.89	
8) freon 114										0.000#	-1.00	
9) freon 142b										0.000#	-1.00	
10) chloromethane	0.937	1.055	0.882	0.910	0.912	1.165	0.941		0.897	0.962	10.16	
11) vinyl chloride	1.008	1.050	0.981	0.999	0.983	0.928	1.000		0.978	0.991	3.47	
12) 1,3-butadiene										0.000#	-1.00	
13) bromomethane	0.577	0.632	0.543	0.540	0.531	0.569	0.516		0.554	0.558	6.43	
14) chloroethane	0.535	0.611	0.473	0.456	0.426	0.746			0.495	0.534	20.78	
	----- Linear regression ----- Coefficient = 0.9985											
	Response Ratio = 0.00739 + 0.43515 *A											
15) vinyl bromide	0.511	0.503	0.512	0.511	0.514	0.471	0.514		0.514	0.506	2.94	
16) trichlorofluoromethane	0.794	0.833	0.790	0.790	0.781	0.751	0.779		0.793	0.789	2.85	
17) ethyl ether	0.267	0.260	0.270	0.255	0.254	0.235	0.237		0.282	0.258	6.27	
18) acrolein	0.158	0.171	0.152	0.141	0.140		0.137		0.148	0.150	8.09	
19) freon 113	0.399	0.379	0.396	0.385	0.384	0.407	0.376		0.409	0.392	3.21	
20) 1,1-dichloroethene	0.496	0.465	0.464	0.441	0.463	0.466	0.438		0.478	0.464	3.98	
21) acetone	0.075	0.075	0.078	0.075	0.077	0.060	0.073		0.084	0.075	9.16	

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Initial Calibration Summary

Page 2 of 5

Job Number: JC65632

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	acetone	0.132	0.121	0.117	0.113	0.109	0.125	0.120	6.94
22)	acetonitrile	0.132	0.121	0.117	0.113	0.109	0.125	0.120	6.94
23)	iodomethane	0.949	0.945	0.912	0.878	0.914	1.085	0.864	0.939
24)	carbon disulfide	1.848	1.825	1.722	1.624	1.715	2.190	1.618	1.784
25)	methylene chloride	0.561	0.520	0.534	0.507	0.518	0.613	0.496	0.531
26)	methyl acetate	0.599	0.616	0.533	0.529	0.526	0.501	0.573	0.554
27)	methyl tert-butyl ether	1.564	1.572	1.608	1.585	1.533	1.768	1.512	1.687
28)	trans-1,2-dichloroethene	0.488	0.447	0.469	0.439	0.449	0.551	0.425	0.431
29)	hexane	0.675	0.690	0.641	0.618	0.616	0.831	0.591	0.674
30)	di-isopropyl ether	1.742	1.727	1.741	1.687	1.645	1.993	1.589	1.853
31)	ethyl tert-butyl ether	1.598	1.555	1.621	1.623	1.608	1.674	1.584	1.490
32)	2-butanone	0.080	0.066	0.081	0.083	0.083	0.080	0.084	0.082
33)	1,1-dichloroethane	0.929	0.950	0.897	0.842	0.842	1.136	0.797	0.934
34)	chloroprene	0.706	0.683	0.714	0.671	0.691	0.775	0.659	0.720
35)	acrylonitrile	0.293	0.243	0.283	0.274	0.271	0.259	0.292	0.274
36)	vinyl acetate	0.091	0.093	0.095	0.093	0.092	0.091	0.093	1.83
37)	ethyl acetate	0.100	0.094	0.101	0.105	0.104	0.102	0.101	0.101
38)	2,2-dichloropropane	0.749	0.967	0.734	0.696	0.680	1.027	0.661	0.764
39)	cis-1,2-dichloroethene	0.548	0.513	0.532	0.508	0.515	0.571	0.497	0.572
40)	methyl acrylate	0.088	0.097	0.093	0.097	0.096	0.086	0.093	4.94
41)	propionitrile	0.166	0.168	0.173	0.175	0.169	0.176	0.166	0.173
42)	bromochloromethane	0.299	0.344	0.275	0.259	0.257	0.367	0.251	0.281
43)	tetrahydrofuran	0.329	0.310	0.298	0.294	0.285	0.279	0.306	0.300
44)	chloroform	0.839	0.798	0.813	0.769	0.774	0.890	0.740	0.858
45)	tert-butyl formate	0.515	0.507	0.523	0.505	0.482	0.567	0.473	0.515
46)	dibromofluoromethane (s)	0.505	0.498	0.498	0.496	0.495	0.502	0.505	0.499
47)	methacrylonitrile	0.255	0.227	0.258	0.259	0.262	0.256	0.260	0.254
48)	cyclohexane	0.751	0.800	0.773	0.743	0.738	0.810	0.730	0.801
49)	1,1,1-trichloroethane	0.755	0.785	0.741	0.719	0.715	0.854	0.702	0.731
50)	iso-butyl alcohol	0.044	0.055	0.046	0.044	0.047	0.046	0.046	0.047
51)	1,1-dichloropropene	0.623	0.589	0.619	0.612	0.620	0.681	0.607	0.646

Initial Calibration Summary

Page 3 of 5

Job Number: JC65632

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

52)	carbon tetrachloride	0.629 0.629 0.650 0.621 0.624 0.727 0.614 0.660 0.637	0.643	5.35
53)	tert-amyl alcohol	0.069 0.068 0.067 0.069 0.066	0.066	0.070
			0.068	2.23
54)	I 1,4-difluorobenzene	-----ISTD-----		
55)	1,2-dichloroethane-d4 (s)	0.357 0.356 0.366 0.352 0.346 0.355 0.343 0.366 0.365 0.355 0.356		2.20
56)	benzene	1.270 1.255 1.238 1.184 1.183 1.383 1.120 1.377 1.279		1.254
57)	iso-octane	1.203 1.185 1.194 1.175 1.245 1.342 1.203 1.330 1.229		6.95
58)	tert-amyl methyl ether	1.087 1.089 1.071 1.028 1.012 1.173 0.963 1.140 1.099 1.255 1.092		4.99
59)	heptane	0.237 0.258 0.231 0.222 0.221 0.235 0.217 0.257 0.243		7.68
60)	isopropyl acetate	0.075 0.079 0.080 0.078	0.075	0.078
61)	1,2-dichloroethane	0.402 0.395 0.387 0.372 0.372 0.493 0.356	0.403	0.397
62)	n-butyl alcohol	0.019 0.019 0.019 0.019 0.021 0.019 0.020 0.020		10.56
63)	ethyl acrylate	0.385 0.442 0.413 0.418 0.431 0.525 0.421	0.410	0.431
64)	trichloroethene	0.280 0.279 0.287 0.275 0.284 0.314 0.274 0.259 0.298 0.282 0.283		5.16
65)	2-nitropropane	0.166 0.162 0.141 0.151 0.147	0.142	0.156
66)	methylcyclohexane	0.627 0.628 0.625 0.589 0.591 0.734 0.561 0.696 0.653		6.45
67)	2-chloroethyl vinyl ether	0.172 0.177 0.178 0.186 0.188 0.198 0.184 0.208 0.182		9.63
68)	methyl methacrylate	0.080 0.084 0.086 0.092	0.089	0.082
69)	1,2-dichloropropane	0.333 0.360 0.322 0.312 0.316 0.400 0.302	0.330	0.334
70)	dibromomethane	0.190 0.193 0.190 0.190 0.190 0.194 0.183 0.191 0.194		1.77
71)	bromodichloromethane	0.392 0.380 0.392 0.384 0.386 0.405 0.374 0.402 0.398 0.371 0.388		2.97
72)	epichlorohydrin	0.047 0.046 0.046 0.047 0.046 0.055 0.045	0.047	0.047
73)	cis-1,3-dichloropropene	0.449 0.457 0.447 0.461 0.475 0.480 0.467 0.505 0.465		6.74
74)	4-methyl-2-pentanone	0.177 0.183 0.178 0.180 0.176 0.197 0.166 0.185 0.180 0.174 0.180		5.56
75)	3-methyl-1-butanol	0.032 0.032 0.031 0.032 0.031 0.040 0.029	0.033	0.032
76)	I chlorobenzene-d5	-----ISTD-----		
77)	toluene-d8 (s)	1.351 1.339 1.357 1.332 1.285 1.341 1.243 1.383 1.398 1.332 1.336		9.51
78)	toluene	0.820 0.838 0.827 0.791 0.790 0.896 0.726 0.911 0.890 0.960 0.845		4.44
79)	trans-1,3-dichloropropene	0.458 0.463 0.473 0.462 0.454 0.491 0.420 0.507 0.495		8.18
80)	ethyl methacrylate	0.475 0.484 0.486 0.463 0.452 0.490 0.422	0.520	0.469
81)	1,1,2-trichloroethane	0.265 0.252 0.258 0.249 0.242 0.279 0.228 0.234 0.276	0.254	6.97

69.11
G

Initial Calibration Summary

Page 4 of 5

Job Number: JC65632

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

82)	2-hexanone	0.186 0.184 0.182 0.173 0.169 0.189 0.157 0.184 0.200 0.194 0.182	6.92
83)	tetrachloroethene	0.348 0.314 0.340 0.327 0.325 0.362 0.302 0.311 0.364	0.333 6.76
84)	1,3-dichloropropane	0.475 0.502 0.481 0.475 0.465 0.558 0.437 0.551 0.489	0.492 7.99
85)	butyl acetate	0.417 0.303 0.263 0.255 ----- Linear regression ----- Coefficient = 0.9987 Response Ratio = 0.02077 + 0.23792 *A	0.305 22.53
86)	3,3-dimethyl-1-butanol		0.000# -1.00
87)	dibromochloromethane	0.341 0.333 0.326 0.327 0.320 0.403 0.303	0.356 0.339 8.98
88)	1,2-dibromoethane	0.316 0.293 0.306 0.299 0.299 0.313 0.283 0.264 0.324	0.300 6.07
89)	n-butyl ether	1.606 1.596 1.619 1.478 1.411 1.748 1.271	1.644 1.547 9.79
90)	chlorobenzene	0.819 0.810 0.807 0.804 0.808 0.883 0.773 0.822 0.832 0.838	0.820 3.48
91)	1,1,1,2-tetrachloroethane	0.407 0.397 0.409 0.381 0.365 0.388 0.337 0.445 0.429	0.395 8.23
92)	ethylbenzene	1.441 1.441 1.474 1.379 1.386 1.588 1.282 1.599 1.508 1.719	1.482 8.56
93)	m,p-xylene	0.554 0.534 0.561 0.535 0.537 0.568 0.505 0.574 0.588 0.658	0.561 7.41
94)	o-xylene	0.618 0.602 0.644 0.596 0.587 0.674 0.544 0.630 0.657 0.549	0.610 7.11
95)	styrene	0.906 0.901 0.896 0.831 0.847 0.961 0.803 1.055 0.923 0.935	0.906 7.91
96)	butyl acrylate	0.797 0.797 0.757 0.665 0.624	0.568 0.813 0.717 13.63
97)	bromoform	0.231 0.210 0.229 0.215 0.211 0.251 0.202 0.184 0.234	0.219 9.04
98)	isopropylbenzene	1.648 1.647 1.755 1.632 1.556 1.768 1.410 1.707 1.839	1.662 7.65
99)	cis-1,4-dichloro-2-butene	0.179 0.178 0.173 0.156 0.148	0.138 0.190 0.166 11.33
100)	I 1,4-dichlorobenzene-d	----- ISTD -----	
101)	4-bromofluorobenzene (s)	0.797 0.801 0.808 0.834 0.868 0.792 0.877 0.785 0.784 0.798 0.814	4.15
102)	bromobenzene	0.641 0.643 0.656 0.653 0.701 0.695 0.681 0.667 0.644	0.664 3.43
103)	1,1,2,2-tetrachloroethane	0.930 0.933 0.964 0.981 0.967 1.035 0.902 0.991 0.963	0.963 4.04
104)	trans-1,4-dichloro-2-butene	0.209 0.191 0.190 0.184 0.177	0.163 0.190 0.186 7.67
105)	1,2,3-trichloropropane	0.227 0.230 0.229 0.230 0.237 0.225 0.221	0.233 0.229 2.17
106)	n-propylbenzene	3.183 3.254 3.369 3.392 3.451 3.561 3.186 3.335 3.412 3.933	3.408 6.42
107)	2-chlorotoluene	0.648 0.656 0.708 0.726 0.754 0.726 0.731 0.622 0.695	0.696 6.41
108)	4-chlorotoluene	1.716 1.788 1.776 1.754 1.817 1.923 1.761 1.841 1.803	1.798 3.32
109)	4-ethyltoluene		0.000# -1.00
110)	1,3,5-trimethylbenzene		

6.9.11
G

Initial Calibration Summary

Page 5 of 5

Job Number: JC65632

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

111)	tert-butylbenzene	2.498 2.398 2.635 2.758 2.765 2.656 2.604 2.584 2.642 2.953 2.649	5.77
		0.471 0.443 0.552 0.596 0.616 0.530 0.579	0.536 0.540 11.00
112)	1,2,4-trimethylbenzene	2.417 2.338 2.605 2.632 2.698 2.628 2.490 2.518 2.590 2.927 2.584	6.28
		2.417 2.338 2.605 2.632 2.698 2.628 2.490 2.518 2.590 2.927 2.584	6.28
113)	sec-butylbenzene	3.263 3.111 3.598 3.716 3.757 3.476 3.394 3.110 3.532 3.574 3.453	6.68
114)	1,3-dichlorobenzene	1.217 1.201 1.281 1.260 1.244 1.391 1.173 1.229 1.285 1.423 1.270	6.31
115)	p-isopropyltoluene	2.721 2.628 2.939 3.008 3.052 2.859 2.807 2.738 2.939 2.907 2.860	4.73
116)	1,4-dichlorobenzene	1.302 1.219 1.289 1.266 1.252 1.373 1.182 1.427 1.312	1.291 5.82
117)	1,2-dichlorobenzene	1.315 1.342 1.382 1.358 1.332 1.496 1.248 1.573 1.422 1.436 1.390	6.79
118)	1,4-diethylbenzene		0.000# -1.00
119)	n-butylbenzene	1.428 1.440 1.528 1.453 1.458 1.559 1.359 1.585 1.518 1.697 1.503	6.40
120)	1,2,4,5-tetramethylbenzene		0.000# -1.00
121)	1,2-dibromo-3-chloropropane	0.271 0.260 0.259 0.258 0.248 0.284 0.226 0.259 0.275	0.260 6.45
122)	1,3,5-trichlorobenzene	1.305 1.184 1.313 1.300 1.239 1.480 1.159 1.327 1.365 1.488 1.316	8.30
123)	2-ethylhexyl acrylate	0.965 1.043 0.984 0.984 0.938 1.093 0.886	1.080 0.997 7.14
124)	1,2,4-trichlorobenzene	1.119 1.060 1.152 1.123 1.060 1.208 0.987 1.202 1.214 1.284 1.141	7.82
125)	hexachlorobutadiene	0.469 0.441 0.489 0.503 0.505 0.503 0.492 0.401 0.498	0.478 7.45
126)	naphthalene	3.027 3.144 2.923 2.833 2.713	2.448 3.167 2.894 8.82
127)	1,2,3-trichlorobenzene	1.006 0.975 1.043 1.033 0.993 1.080 0.924 1.120 1.078 1.059 1.031	5.62
128)	hexachloroethane	0.431 0.413 0.494 0.555 0.564	0.542 0.498 0.500 11.91
129)	2-methylnaphthalene	1.105 1.133 1.144 1.094 1.169	1.101 1.195 1.134 3.33

(#) = Out of Range ### Number of calibration levels exceeded format ###

MA9165.M

Thu Apr 05 12:23:06 2018 RPT1

69.11

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Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9165\A240814.D Vial: 14
 Acq On : 3 Apr 2018 11:40 pm Operator: JessicaP
 Sample : icv9165-50 Inst : MSA
 Misc : MS25128,VA9165,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 11:21:49 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	107	0.00
2	ethanol			NA		
3 M	tertiary butyl alcohol	0.886	0.904	-2.0	110	0.03
4	1,4-dioxane	0.056	0.056	0.0	108	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	109	0.00
6 M	chlorodifluoromethane	0.771	0.713	7.5	103	0.02
7 M	dichlorodifluoromethane	0.844	0.760	10.0	96	0.02
8	freon 114			NA		
9	freon 142b			NA		
10 M	chloromethane	0.962	0.842	12.5	101	0.01
11 M	vinyl chloride	0.991	0.867	12.5	95	0.02
12	1,3-butadiene			NA		
13 M	bromomethane	0.558	0.515	7.7	104	0.00
14 M	chloroethane	True 50.000	Calc. 48.193	% Drift 3.6	102	0.00
15	vinyl bromide	0.506	0.532	-5.1	114	0.00
16 M	trichlorofluoromethane	0.789	0.726	8.0	100	0.02
17 M	ethyl ether	0.258	0.261	-1.2	112	0.00
18 M	acrolein	0.150	0.189	-26.0	147	0.00
19	freon 113	0.392	0.452	-15.3	128	0.01
20 M	1,1-dichloroethene	0.464	0.424	8.6	105	0.01
21 M	acetone	0.075	0.068	9.3	99	0.01
22 M	acetonitrile	0.120	0.141	-17.5	132	0.07
23 M	iodomethane	0.936	0.876	6.4	109	0.01
24 M	carbon disulfide	1.791	1.682	6.1	113	0.00
25 M	methylene chloride	0.535	0.520	2.8	112	0.00
26 M	methyl acetate	0.554	0.511	7.8	105	0.00
27 M	methyl tert butyl ether	1.603	1.564	2.4	108	0.00
28 M	trans-1,2-dichloroethene	0.465	0.436	6.2	108	0.00
29	hexane	0.667	0.532	20.2	94	0.00
30 M	di-isopropyl ether	1.778	1.665	6.4	108	0.00
31 M	ethyl tert-butyl ether	1.610	1.598	0.7	107	0.00
32 M	2-butanone	0.080	0.080	0.0	104	0.01
33 M	1,1-dichloroethane	0.916	0.836	8.7	108	0.00
34 M	chloroprene	0.702	0.695	1.0	113	0.00
35 M	acrylonitrile	0.274	0.293	-6.9	116	0.00
36 M	vinyl acetate	0.093	0.097	-4.3	111	0.00
37 M	ethyl acetate	0.101	0.108	-6.9	112	0.00

Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.659	16.1	103	0.00	9.66
39 M	cis-1,2-dichloroethene	0.534	0.519	2.8	111	0.00	9.63
40	methyl acrylate	0.093	0.088	5.4	104	0.00	9.70
41 M	propionitrile	0.171	0.175	-2.3	109	0.00	9.68
42 M	bromochloromethane	0.292	0.257	12.0	108	0.00	9.94
43 M	tetrahydrofuran	0.300	0.385	-28.3	143	0.00	9.99
44 M	chloroform	0.830	0.777	6.4	110	0.00	10.00
45	tert-butyl formate	0.511	0.427	16.4	92	0.00	10.07
46 S	dibromofluoromethane (s)	0.498	0.499	-0.2	110	0.00	10.21
47 M	methacrylonitrile	0.254	0.251	1.2	106	0.00	9.88
48	cyclohexane	0.770	0.941	-22.2	138	0.00	10.38
49 M	1,1,1-trichloroethane	0.750	0.685	8.7	104	0.00	10.29
50	iso-butyl alcohol	0.047	0.046	2.1	114	0.00	10.45
51	1,1-dichloropropene	0.625	0.602	3.7	107	0.00	10.47
52	carbon tetrachloride	0.643	0.603	6.2	106	0.00	10.51
53	tert-amyl alcohol	0.068	0.069	-1.5	109	0.00	10.60
54 I	1,4-difluorobenzene	1.000	1.000	0.0	108	0.00	11.12
55 S	1,2-dichloroethane-d4 (s)	0.356	0.353	0.8	108	0.00	10.64
56 M	benzene	1.254	1.177	6.1	107	0.00	10.74
57 M	iso-octane	1.234	1.174	4.9	108	0.00	10.79
58	tert-amyl methyl ether	1.092	1.025	6.1	108	0.00	10.80
59 M	heptane	0.236	0.240	-1.7	117	0.00	10.95
60 M	isopropyl acetate	0.078	0.078	0.0	106	0.00	10.67
61 M	1,2-dichloroethane	0.397	0.373	6.0	108	0.00	10.73
62	n-butyl alcohol	0.019	0.019	0.0	107	0.00	11.22
63	ethyl acrylate	0.431	0.411	4.6	106	0.00	11.48
64 M	trichloroethene	0.283	0.275	2.8	108	0.00	11.47
65 M	2-nitropropane	0.152	0.190	-25.0	136	0.00	12.27
66 m	methylcyclohexane	0.634	0.568	10.4	104	0.00	11.74
67 M	2-chloroethyl vinyl ether	0.186	0.192	-3.2	112	0.00	12.30
68 M	methyl methacrylate	0.086	0.083	3.5	105	0.00	11.75
69 M	1,2-dichloropropane	0.334	0.309	7.5	107	0.00	11.74
70 M	dibromomethane	0.191	0.192	-0.5	109	0.00	11.90
71 M	bromodichloromethane	0.388	0.376	3.1	106	0.00	12.03
72	epichlorohydrin	0.047	0.044	6.4	102	0.00	12.42
73 M	cis-1,3-dichloropropene	0.467	0.451	3.4	106	0.00	12.53
74 M	4-methyl-2-pentanone	0.180	0.176	2.2	106	0.00	12.65
75 M	3-methyl-1-butanol	0.032	0.032	0.0	107	0.00	12.65
76 I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.52
77 S	toluene-d8 (s)	1.336	1.356	-1.5	104	0.00	12.86
78	toluene	0.845	0.830	1.8	107	0.00	12.94
79	trans-1,3-dichloropropene	0.469	0.442	5.8	98	0.00	13.13
80	ethyl methacrylate	0.474	0.449	5.3	99	0.00	13.15
81	1,1,2-trichloroethane	0.254	0.256	-0.8	105	0.00	13.36
82	2-hexanone	0.182	0.173	4.9	102	0.00	13.57
83 M	tetrachloroethene	0.333	0.380	-14.1	119	0.00	13.58
84 M	1,3-dichloropropane	0.492	0.490	0.4	105	0.00	13.57
-----		True	Calc.	% Drift	-----		
85 M	butyl acetate	50.000	53.430	-6.9	107	0.00	13.66
-----		AvgRF	CCRF	% Dev	-----		
86	3,3-dimethyl-1-butanol			NA			
87 M	dibromochloromethane	0.339	0.339	0.0	106	0.00	13.85
88 M	1,2-dibromoethane	0.300	0.307	-2.3	105	0.00	14.02
89 M	n-butyl ether	1.547	1.430	7.6	99	0.00	14.49
90 M	chlorobenzene	0.820	0.785	4.3	100	0.00	14.55
91 M	1,1,1,2-tetrachloroethane	0.395	0.392	0.8	105	0.00	14.61

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Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.388	6.3	103	0.00	14.63
93 M	m,p-xylene	0.561	0.534	4.8	102	0.00	14.75
94 M	o-xylene	0.610	0.604	1.0	104	0.00	15.21
95 M	styrene	0.906	0.839	7.4	103	0.00	15.22
96	butyl acrylate	0.717	0.682	4.9	105	0.00	15.02
97 M	bromoform	0.219	0.226	-3.2	107	0.00	15.48
98	isopropylbenzene	1.662	1.652	0.6	103	0.00	15.60
99	cis-1,4-dichloro-2-butene	0.166	0.156	6.0	102	0.00	15.65
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	17.12
101 S	4-bromofluorobenzene (s)	0.814	0.829	-1.8	103	0.00	15.81
102 M	bromobenzene	0.664	0.656	1.2	104	0.00	16.03
103 M	1,1,2,2-tetrachloroethane	0.963	0.973	-1.0	103	0.00	15.91
104 M	trans-1,4-dichloro-2-bute	0.186	0.232	-24.7	131	0.00	15.96
105 M	1,2,3-trichloropropane	0.229	0.240	-4.8	108	0.00	16.00
106 M	n-propylbenzene	3.408	3.373	1.0	103	0.00	16.06
107 M	2-chlorotoluene	0.696	0.704	-1.1	101	0.00	16.22
108 M	4-chlorotoluene	1.798	1.815	-0.9	107	0.00	16.32
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.700	-1.9	102	0.00	16.23
111 M	tert-butylbenzene	0.540	0.603	-11.7	105	0.00	16.63
112 M	1,2,4-trimethylbenzene	2.584	2.673	-3.4	105	0.00	16.67
113 M	sec-butylbenzene	3.453	3.733	-8.1	104	0.00	16.87
114 M	1,3-dichlorobenzene	1.270	1.261	0.7	104	0.00	17.06
115 M	p-isopropyltoluene	2.860	2.997	-4.8	103	0.00	17.00
116 M	1,4-dichlorobenzene	1.291	1.264	2.1	104	0.00	17.15
117 M	1,2-dichlorobenzene	1.390	1.355	2.5	104	0.00	17.59
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.467	2.4	105	0.00	17.46
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.259	0.4	104	0.00	18.43
122 M	1,3,5-trichlorobenzene	1.316	1.290	2.0	103	0.00	18.65
123	2-ethylhexyl acrylate	0.997	1.003	-0.6	106	0.00	19.36
124 M	1,2,4-trichlorobenzene	1.141	1.142	-0.1	106	0.00	19.37
125 M	hexachlorobutadiene	0.478	0.485	-1.5	100	0.00	19.53
126 M	naphthalene	2.894	2.957	-2.2	108	0.00	19.70
127 M	1,2,3-trichlorobenzene	1.031	1.033	-0.2	104	0.00	19.97
128 M	hexachloroethane	0.500	0.575	-15.0	108	0.00	17.89
129	2-methylnaphthalene	1.134	1.054	7.1	100	0.00	20.99

(#= Out of Range
A240809.D MA9165.MSPCC's out = 0 CCC's out = 0
Thu Apr 05 11:39:45 2018 RPT16.9.12
6

Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9165\A240815.D Vial: 15
 Acq On : 4 Apr 2018 12:09 am Operator: JessicaP
 Sample : icv9165-50 Inst : MSA
 Misc : MS25128,VA9165,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 12:19:04 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	7.81
2	ethanol		-----NA-----				
3 M	tertiary butyl alcohol		-----NA-----				
4	1,4-dioxane		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	10.18
6 M	chlorodifluoromethane		-----NA-----				
7 M	dichlorodifluoromethane		-----NA-----				
8	freon 114		-----NA-----				
9	freon 142b		-----NA-----				
10 M	chloromethane		-----NA-----				
11 M	vinyl chloride		-----NA-----				
12	1,3-butadiene		-----NA-----				
13 M	bromomethane		-----NA-----				
14 M	chloroethane		-----True-----	Calc.	% Drift	-----	-----
15	vinyl bromide		-----AvgRF-----	CCRF	% Dev	-----	-----
16 M	trichlorofluoromethane			-----NA-----			
17 M	ethyl ether			-----NA-----			
18 M	acrolein			-----NA-----			
19	freon 113			-----NA-----			
20 M	1,1-dichloroethene			-----NA-----			
21 M	acetone			-----NA-----			
22 M	acetonitrile	0.120	0.114	5.0	102	0.02	7.62
23 M	iodomethane			-----NA-----			
24 M	carbon disulfide			-----NA-----			
25 M	methylene chloride			-----NA-----			
26 M	methyl acetate			-----NA-----			
27 M	methyl tert butyl ether			-----NA-----			
28 M	trans-1,2-dichloroethene			-----NA-----			
29	hexane			-----NA-----			
30 M	di-isopropyl ether			-----NA-----			
31 M	ethyl tert-butyl ether			-----NA-----			
32 M	2-butanone			-----NA-----			
33 M	1,1-dichloroethane			-----NA-----			
34 M	chloroprene			-----NA-----			
35 M	acrylonitrile			-----NA-----			
36 M	vinyl acetate			-----NA-----			
37 M	ethyl acetate			-----NA-----			

Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane		-----	-NA-----					
39 M	cis-1,2-dichloroethene		-----	-NA-----					
40	methyl acrylate		-----	-NA-----					
41 M	propionitrile		-----	-NA-----					
42 M	bromochloromethane		-----	-NA-----					
43 M	tetrahydrofuran		-----	-NA-----					
44 M	chloroform		-----	-NA-----					
45	tert-butyl formate		-----	-NA-----					
46 S	dibromofluoromethane (s)	0.498	0.503	-1.0 105	0.00				10.20
47 M	methacrylonitrile		-----	-NA-----					
48	cyclohexane		-----	-NA-----					
49 M	1,1,1-trichloroethane		-----	-NA-----					
50	iso-butyl alcohol		-----	-NA-----					
51	1,1-dichloropropene		-----	-NA-----					
52	carbon tetrachloride		-----	-NA-----					
53	tert-amyl alcohol		-----	-NA-----					
54 I	1,4-difluorobenzene	1.000	1.000	0.0 98	0.00				11.12
55 S	1,2-dichloroethane-d4 (s)	0.356	0.363	-2.0 101	0.00				10.64
56 M	benzene		-----	-NA-----					
57 M	iso-octane		-----	-NA-----					
58	tert-amyl methyl ether		-----	-NA-----					
59 M	heptane		-----	-NA-----					
60 M	isopropyl acetate		-----	-NA-----					
61 M	1,2-dichloroethane		-----	-NA-----					
62	n-butyl alcohol		-----	-NA-----					
63	ethyl acrylate		-----	-NA-----					
64 M	trichloroethene		-----	-NA-----					
65 M	2-nitropropane		-----	-NA-----					
66 m	methylcyclohexane		-----	-NA-----					
67 M	2-chloroethyl vinyl ether		-----	-NA-----					
68 M	methyl methacrylate		-----	-NA-----					
69 M	1,2-dichloropropene		-----	-NA-----					
70 M	dibromomethane		-----	-NA-----					
71 M	bromodichloromethane		-----	-NA-----					
72	epichlorohydrin		-----	-NA-----					
73 M	cis-1,3-dichloropropene		-----	-NA-----					
74 M	4-methyl-2-pentanone		-----	-NA-----					
75 M	3-methyl-1-butanol		-----	-NA-----					
76 I	chlorobenzene-d5	1.000	1.000	0.0 89	0.00				14.52
77 S	toluene-d8 (s)	1.336	1.348	-0.9 90	0.00				12.86
78	toluene		-----	-NA-----					
79	trans-1,3-dichloropropene		-----	-NA-----					
80	ethyl methacrylate		-----	-NA-----					
81	1,1,2-trichloroethane		-----	-NA-----					
82	2-hexanone		-----	-NA-----					
83 M	tetrachloroethene	0.333	0.309	7.2 84	0.00				13.58
84 M	1,3-dichloropropene		-----	-NA-----					
85 M	butyl acetate		-----	True	Calc.	% Drift	-----		
86	3,3-dimethyl-1-butanol		-----	AvgRF	CCRF	% Dev	-----		
87 M	dibromochloromethane		-----		-NA-----				
88 M	1,2-dibromoethane		-----		-NA-----				
89 M	n-butyl ether		-----		-NA-----				
90 M	chlorobenzene		-----		-NA-----				
91 M	1,1,1,2-tetrachloroethane		-----		-NA-----				

6.9.13
6

Initial Calibration Verification

Job Number: JC65632

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene		-----	-NA-----						
93 M	m,p-xylene		-----	-NA-----						
94 M	o-xylene		-----	-NA-----						
95 M	styrene		-----	-NA-----						
96	butyl acrylate		-----	-NA-----						
97 M	bromoform		-----	-NA-----						
98	isopropylbenzene		-----	-NA-----						
99	cis-1,4-dichloro-2-butene		-----	-NA-----						
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	17.12			
101 S	4-bromofluorobenzene (s)	0.814	0.775	4.8	100	0.00	15.81			
102 M	bromobenzene		-----	-NA-----						
103 M	1,1,2,2-tetrachloroethane		-----	-NA-----						
104 M	trans-1,4-dichloro-2-bute		-----	-NA-----						
105 M	1,2,3-trichloropropane		-----	-NA-----						
106 M	n-propylbenzene		-----	-NA-----						
107 M	2-chlorotoluene		-----	-NA-----						
108 M	4-chlorotoluene		-----	-NA-----						
109	4-ethyltoluene		-----	-NA-----						
110 M	1,3,5-trimethylbenzene		-----	-NA-----						
111 M	tert-butylbenzene		-----	-NA-----						
112 M	1,2,4-trimethylbenzene		-----	-NA-----						
113 M	sec-butylbenzene		-----	-NA-----						
114 M	1,3-dichlorobenzene		-----	-NA-----						
115 M	p-isopropyltoluene		-----	-NA-----						
116 M	1,4-dichlorobenzene		-----	-NA-----						
117 M	1,2-dichlorobenzene		-----	-NA-----						
118	1,4-diethylbenzene		-----	-NA-----						
119 M	n-butylbenzene		-----	-NA-----						
120	1,2,4,5-tetramethylbenzen		-----	-NA-----						
121 M	1,2-dibromo-3-chloropropa		-----	-NA-----						
122 M	1,3,5-trichlorobenzene		-----	-NA-----						
123	2-ethylhexyl acrylate		-----	-NA-----						
124 M	1,2,4-trichlorobenzene		-----	-NA-----						
125 M	hexachlorobutadiene		-----	-NA-----						
126 M	naphthalene		-----	-NA-----						
127 M	1,2,3-trichlorobenzene		-----	-NA-----						
128 M	hexachloroethane		-----	-NA-----						
129	2-methylnaphthalene		-----	-NA-----						

(#= Out of Range
A240809.D MA9165.MSPCC's out = 0 CCC's out = 0
Thu Apr 05 12:22:15 2018 RPT1

Continuing Calibration Summary

Job Number: JC65632

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...9-18\va9204\A241495.d Vial: 2
 Acq On : 8 May 2018 6:46 am Operator: jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 12:17:39 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	118	-0.01	7.80
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	0.886	0.933	-5.3	122	-0.02	7.92
4	1,4-dioxane	0.056	0.056	0.0	127	-0.01	11.84
5 I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.17
6 M	chlorodifluoromethane	0.771	0.673	12.7	93	0.03	4.21
7 M	dichlorodifluoromethane	0.844	0.961	-13.9	121	0.01	4.19
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.962	0.990	-2.9	120	0.00	4.53
11 M	vinyl chloride	0.991	1.197	-20.8#	131	0.01	4.83
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.558	0.707	-26.7#	140	0.00	5.51
14 M	chloroethane	True 20.000	Calc. 24.562	% Drift -22.8#	125	0.00	5.71
		AvgRF	CCRF	% Dev			
15	vinyl bromide	0.506	0.735	-45.3#	154	0.00	6.09
16 M	trichlorofluoromethane	0.789	0.954	-20.9#	129	0.01	6.24
17 M	ethyl ether			-----NA-----			
18 M	acrolein	0.150	0.145	3.3	103	0.00	6.90
19	freon 113	0.392	0.514	-31.1#	139	0.00	7.11
20 M	1,1-dichloroethene	0.464	0.518	-11.6	120	0.00	7.10
21 M	acetone	0.075	0.065	13.3	89	0.00	7.14
22 M	acetonitrile	0.120	0.108	10.0	96	0.00	7.59
23 M	iodomethane			-----NA-----			
24 M	carbon disulfide			-----NA-----			
25 M	methylene chloride	0.535	0.579	-8.2	116	0.00	7.85
26 M	methyl acetate	0.554	0.446	19.5	90	-0.02	7.64
27 M	methyl tert butyl ether			-----NA-----			
28 M	trans-1,2-dichloroethene	0.465	0.489	-5.2	112	0.00	8.26
29	hexane	0.667	0.577	13.5	97	0.00	8.62
30 M	di-isopropyl ether	1.778	1.637	7.9	101	0.00	8.87
31 M	ethyl tert-butyl ether	1.610	1.754	-8.9	116	0.00	9.36
32 M	2-butanone	0.080	0.076	5.0	101	0.00	9.58
33 M	1,1-dichloroethane	0.916	0.876	4.4	105	-0.01	8.85
34 M	chloroprene	0.702	0.647	7.8	97	-0.01	8.97
35 M	acrylonitrile			-----NA-----			
36 M	vinyl acetate	0.093	0.091	2.2	105	0.00	8.85
37 M	ethyl acetate	0.101	0.089	11.9	95	-0.01	9.60

Continuing Calibration Summary

Page 2 of 3

Job Number: JC65632

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.903	-15.0	132	-0.01	9.64
39 M	cis-1,2-dichloroethene	0.534	0.553	-3.6	111	0.00	9.61
40	methyl acrylate			-----NA-----			
41 M	propionitrile			-----NA-----			
42 M	bromochloromethane	0.292	0.276	5.5	107	0.00	9.93
43 M	tetrahydrofuran			-----NA-----			
44 M	chloroform	0.830	0.830	0.0	109	-0.01	9.99
45	tert-butyl formate	0.511	0.570	-11.5	117	0.00	10.05
46 S	dibromofluoromethane (s)	0.498	0.501	-0.6	108	0.00	10.19
47 M	methacrylonitrile			-----NA-----			
48	cyclohexane	0.770	0.851	-10.5	118	0.00	10.37
49 M	1,1,1-trichloroethane	0.750	0.877	-16.9	127	-0.01	10.27
50	iso-butyl alcohol	0.047	0.045#	4.3	106	-0.01	10.44
51	1,1-dichloropropene	0.625	0.609	2.6	105	0.00	10.46
52	carbon tetrachloride	0.643	0.753	-17.1	124	0.00	10.49
53	tert-amyl alcohol	0.068	0.072	-5.9	115	0.00	10.59
54 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	11.11
55 S	1,2-dichloroethane-d4 (s)	0.356	0.344	3.4	98	-0.01	10.63
56 M	benzene	1.254	1.237	1.4	104	0.00	10.73
57 M	iso-octane	1.234	1.243	-0.7	108	0.00	10.78
58	tert-amyl methyl ether	1.092	1.181	-8.2	115	0.00	10.79
59 M	heptane	0.236	0.227	3.8	102	0.00	10.94
60 M	isopropyl acetate	0.078	0.083	-6.4	109	-0.01	10.66
61 M	1,2-dichloroethane	0.397	0.392	1.3	105	0.00	10.72
62	n-butyl alcohol	0.019	0.020#	-5.3	111	-0.01	11.21
63	ethyl acrylate	0.431	0.395	8.4	99	0.00	11.47
64 M	trichloroethene	0.283	0.288	-1.8	105	0.00	11.46
65 M	2-nitropropane			-----NA-----			
66 m	methylcyclohexane	0.634	0.663	-4.6	110	0.00	11.72
67 M	2-chloroethyl vinyl ether	0.186	0.185	0.5	108	0.00	12.29
68 M	methyl methacrylate			-----NA-----			
69 M	1,2-dichloropropane	0.334	0.315	5.7	102	-0.01	11.73
70 M	dibromomethane	0.191	0.203	-6.3	111	0.00	11.89
71 M	bromodichloromethane	0.388	0.403	-3.9	107	0.00	12.02
72	epichlorohydrin	0.047	0.043#	8.5	97	0.00	12.41
73 M	cis-1,3-dichloropropene	0.467	0.473	-1.3	110	0.00	12.52
74 M	4-methyl-2-pentanone	0.180	0.180	0.0	105	0.00	12.64
75 M	3-methyl-1-butanol	0.032	0.034#	-6.3	113	0.00	12.64
76 I	chlorobenzene-d5	1.000	1.000	0.0	121	0.00	14.51
77 S	toluene-d8 (s)	1.336	1.215	9.1	108	0.00	12.85
78	toluene	0.845	0.770	8.9	112	0.00	12.93
79	trans-1,3-dichloropropene	0.469	0.461	1.7	118	0.00	13.12
80	ethyl methacrylate			-----NA-----			
81	1,1,2-trichloroethane	0.254	0.249	2.0	117	0.00	13.35
82	2-hexanone	0.182	0.180	1.1	119	0.00	13.56
83 M	tetrachloroethene	0.333	0.339	-1.8	120	0.00	13.57
84 M	1,3-dichloropropane	0.492	0.480	2.4	120	0.00	13.56
85 M	butyl acetate	20.000	17.884	True	Calc.	% Drift	-----
86	3,3-dimethyl-1-butanol			AvgRF	CCRF	% Dev	-----
87 M	dibromochloromethane	0.339	0.350	-----NA-----			
88 M	1,2-dibromoethane	0.300	0.326	-3.2	129	0.00	13.84
89 M	n-butyl ether	1.547	1.438	-8.7	129	0.00	14.01
90 M	chlorobenzene	0.820	0.845	7.0	107	0.00	14.48
91 M	1,1,1,2-tetrachloroethane	0.395	0.396	-3.0	126	0.00	14.54
				-0.3	117	0.00	14.60

6.9.14
6

Continuing Calibration Summary

Job Number: JC65632

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.459	1.6	119	0.00	14.62
93 M	m,p-xylene	0.561	0.577	-2.9	124	0.00	14.74
94 M	o-xylene	0.610	0.625	-2.5	117	0.00	15.20
95 M	styrene	0.906	0.947	-4.5	128	0.00	15.21
96	butyl acrylate	0.717	0.690	3.8	110	0.00	15.01
97 M	bromoform	0.219	0.251	-14.6	132	0.00	15.48
98	isopropylbenzene	1.662	1.719	-3.4	118	0.00	15.59
99	cis-1,4-dichloro-2-butene	0.166	0.159	4.2	111	0.00	15.64
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	131	0.00	17.11
101 S	4-bromofluorobenzene (s)	0.814	0.769	5.5	125	0.00	15.80
102 M	bromobenzene	0.664	0.659	0.8	132	0.00	16.02
103 M	1,1,2,2-tetrachloroethane	0.963	0.921	4.4	125	0.00	15.90
104 M	trans-1,4-dichloro-2-bute			-----NA-----			
105 M	1,2,3-trichloropropane	0.229	0.240	-4.8	137	0.00	15.99
106 M	n-propylbenzene	3.408	3.201	6.1	124	0.00	16.05
107 M	2-chlorotoluene	0.696	0.684	1.7	127	0.00	16.21
108 M	4-chlorotoluene	1.798	1.773	1.4	131	0.00	16.31
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.440	7.9	121	0.00	16.22
111 M	tert-butylbenzene	0.540	0.504	6.7	120	0.00	16.62
112 M	1,2,4-trimethylbenzene	2.584	2.408	6.8	121	0.00	16.66
113 M	sec-butylbenzene	3.453	3.307	4.2	120	0.00	16.86
114 M	1,3-dichlorobenzene	1.270	1.289	-1.5	132	0.00	17.05
115 M	p-isopropyltoluene	2.860	2.778	2.9	124	-0.01	16.99
116 M	1,4-dichlorobenzene	1.291	1.323	-2.5	134	0.00	17.14
117 M	1,2-dichlorobenzene	1.390	1.349	2.9	128	0.00	17.58
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.432	4.7	123	0.00	17.46
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.257	1.2	130	0.00	18.42
122 M	1,3,5-trichlorobenzene	1.316	1.257	4.5	125	0.00	18.64
123	2-ethylhexyl acrylate	0.997	0.699	29.9#	93	0.00	19.35
124 M	1,2,4-trichlorobenzene	1.141	1.107	3.0	126	0.00	19.36
125 M	hexachlorobutadiene	0.478	0.492	-2.9	132	0.00	19.52
126 M	naphthalene	2.894	2.840	1.9	127	0.00	19.69
127 M	1,2,3-trichlorobenzene	1.031	1.028	0.3	129	0.00	19.96
128 M	hexachloroethane			-----NA-----			
129	2-methylnaphthalene	1.134	0.970	14.5	111	0.00	20.97
130	ethylenimine	N/A	1.00	0.0	0#	0.00	0.00
131	bis(chloromethyl)ether	N/A	1.00	0.0	0#	0.00	0.00

(#= Out of Range
A240808.D MA9165.MSPCC's out = 0 CCC's out = 0
Wed May 09 03:54:35 20186.9.14
6

Continuing Calibration Summary

Job Number: JC65632

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kenrickb\va9206\A241545.d Vial: 5
 Acq On : 10 May 2018 9:12 am Operator: oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Tue Apr 17 15:31:13 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	74	0.00	7.80
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	0.886	0.956	-7.9	78	-0.03	7.92
4	1,4-dioxane	0.056	0.062	-10.7	87	0.00	11.85
5 I	pentafluorobenzene	1.000	1.000	0.0	68	0.00	10.17
6 M	chlorodifluoromethane	0.771	0.630	18.3	55	0.00	4.19
7 M	dichlorodifluoromethane	0.844	1.138	-34.8#	91	0.00	4.18
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.962	1.061	-10.3	82	0.00	4.52
11 M	vinyl chloride	0.991	1.207	-21.8#	84	0.00	4.82
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.558	0.681	-22.0#	85	0.00	5.51
14 M	chloroethane	True 20.000	Calc. 24.369	% Drift -21.8#	79	0.00	5.70
15	vinyl bromide	0.506	0.665	-31.4#	88	0.00	6.08
16 M	trichlorofluoromethane	0.789	0.933	-18.3	80	0.01	6.24
17 M	ethyl ether	0.258	0.260	-0.9	66	-0.01	6.66
18 M	acrolein	0.150	0.115	23.3#	52	0.00	6.90
19	freon 113	0.392	0.480	-22.4#	83	0.00	7.10
20 M	1,1-dichloroethene	0.464	0.463	0.2	68	0.00	7.09
21 M	acetone	0.075	0.064	14.7	56	-0.01	7.14
22 M	acetonitrile	0.120	0.114	5.0	64	0.00	7.60
23 M	iodomethane	0.936	0.776	-17.1	58	-0.01	7.38
24 M	carbon disulfide	1.791	1.590	11.2	63	-0.01	7.51
25 M	methylene chloride	0.535	0.530	0.9	68	0.00	7.84
26 M	methyl acetate	0.554	0.467	15.7	60	-0.01	7.64
27 M	methyl tert butyl ether	1.603	1.716	-7.1	73	0.00	8.23
28 M	trans-1,2-dichloroethene	0.465	0.464	0.2	67	-0.01	8.25
29	hexane	0.667	0.577	13.5	61	0.00	8.62
30 M	di-isopropyl ether	1.778	1.510	15.1	59	0.00	8.87
31 M	ethyl tert-butyl ether	1.610	1.552	3.6	65	0.00	9.35
32 M	2-butanone	0.080	0.075	6.3	63	0.00	9.58
33 M	1,1-dichloroethane	0.916	0.843	8.0	64	-0.01	8.85
34 M	chloroprene	0.702	0.642	8.5	61	-0.01	8.97
35 M	acrylonitrile	0.274	0.238	13.1	57	0.00	8.19
36 M	vinyl acetate	0.093	0.086	7.5	63	0.00	8.85
37 M	ethyl acetate	0.101	0.082	18.8	55	0.00	9.62

Continuing Calibration Summary

Page 2 of 3

Job Number: JC65632

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.796	-1.4	74	0.00	9.64
39 M	cis-1,2-dichloroethene	0.534	0.529	0.9	68	0.00	9.61
40	methyl acrylate	0.093	0.077	17.2	54	-0.01	9.69
41 M	propionitrile	0.171	0.116	32.0#	46	-0.01	9.67
42 M	bromochloromethane	0.292	0.267	8.6	66	0.00	9.92
43 M	tetrahydrofuran	0.300	0.225	24.9#	52	0.00	9.98
44 M	chloroform	0.830	0.793	4.5	66	-0.01	9.99
45	tert-butyl formate	0.511	0.309	39.5#	40#	0.00	10.05
46 S	dibromofluoromethane (s)	0.498	0.504	-1.2	69	0.00	10.19
47 M	methacrylonitrile	0.254	0.230	9.6	60	0.00	9.87
48	cyclohexane	0.770	0.766	0.5	68	0.00	10.37
49 M	1,1,1-trichloroethane	0.750	0.810	-8.0	74	0.00	10.28
50	iso-butyl alcohol	0.047	0.044	6.4	66	0.00	10.45
51	1,1-dichloropropene	0.625	0.602	3.7	66	0.00	10.46
52	carbon tetrachloride	0.643	0.701	-9.0	73	-0.01	10.49
53	tert-amyl alcohol	0.068	0.068	0.0	69	-0.01	10.58
54 I	1,4-difluorobenzene	1.000	1.000	0.0	67	0.00	11.11
55 S	1,2-dichloroethane-d4 (s)	0.356	0.344	3.4	63	-0.01	10.63
56 M	benzene	1.254	1.232	1.8	66	0.00	10.73
57 M	iso-octane	1.234	1.139	7.7	63	0.00	10.78
58	tert-amyl methyl ether	1.092	1.067	2.3	66	0.00	10.79
59 M	heptane	0.236	0.233	1.3	67	0.00	10.94
60 M	isopropyl acetate	0.078	0.084	-7.7	70	-0.01	10.66
61 M	1,2-dichloroethane	0.397	0.380	4.3	65	0.00	10.72
62	n-butyl alcohol	0.019	0.020	-5.3	70	0.00	11.21
63	ethyl acrylate	0.431	0.371	13.9	60	0.00	11.47
64 M	trichloroethene	0.283	0.290	-2.5	67	0.00	11.47
65 M	2-nitropropane	0.152	0.093	38.8#	44	-0.01	12.26
66 m	methylcyclohexane	0.634	0.638	-0.6	68	0.00	11.73
67 M	2-chloroethyl vinyl ether	0.186	0.067	64.0#	25#	0.00	12.29
68 M	methyl methacrylate	0.086	0.085	1.5	67	0.00	11.75
69 M	1,2-dichloropropene	0.334	0.307	8.1	64	-0.01	11.73
70 M	dibromomethane	0.191	0.193	-1.0	67	-0.01	11.88
71 M	bromodichloromethane	0.388	0.389	-0.3	66	0.00	12.03
72	epichlorohydrin	0.047	0.041	12.8	59	0.00	12.41
73 M	cis-1,3-dichloropropene	0.467	0.450	3.6	67	0.00	12.52
74 M	4-methyl-2-pentanone	0.180	0.183	-1.7	68	0.00	12.64
75 M	3-methyl-1-butanol	0.032	0.033	-3.1	70	0.00	12.64
76 I	chlorobenzene-d5	1.000	1.000	0.0	75	0.00	14.51
77 S	toluene-d8 (s)	1.336	1.267	5.2	70	0.00	12.85
78	toluene	0.845	0.802	5.1	73	0.00	12.93
79	trans-1,3-dichloropropene	0.469	0.426	9.2	68	0.00	13.12
80	ethyl methacrylate	0.474	0.445	6.2	69	0.00	13.14
81	1,1,2-trichloroethane	0.254	0.248	2.4	72	0.00	13.35
82	2-hexanone	0.182	0.175	3.8	72	0.00	13.56
83 M	tetrachloroethene	0.333	0.344	-3.3	76	0.00	13.57
84 M	1,3-dichloropropane	0.492	0.455	7.5	71	0.00	13.56
85 M	butyl acetate	20.000	17.174	14.1	64	0.00	13.65
86	3,3-dimethyl-1-butanol	-----	AvgRF	CCRF	% Dev	-----	-----
87 M	dibromochloromethane	0.339	0.328	3.2	76	0.00	13.84
88 M	1,2-dibromoethane	0.300	0.317	-5.7	78	0.00	14.02
89 M	n-butyl ether	1.547	1.487	3.9	69	0.00	14.48
90 M	chlorobenzene	0.820	0.855	-4.3	80	0.00	14.54
91 M	1,1,1,2-tetrachloroethane	0.395	0.408	-3.3	75	0.00	14.61

6.9.15
6

Continuing Calibration Summary

Job Number: JC65632

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.533	-3.4	78	0.00	14.62
93 M	m,p-xylene	0.561	0.598	-6.6	80	0.00	14.74
94 M	o-xylene	0.610	0.671	-10.0	78	0.00	15.21
95 M	styrene	0.906	0.947	-4.5	80	0.00	15.21
96	butyl acrylate	0.717	0.665	7.3	66	0.00	15.01
97 M	bromoform	0.219	0.244	-11.4	80	0.00	15.48
98	isopropylbenzene	1.662	1.792	-7.8	77	0.00	15.59
99	cis-1,4-dichloro-2-butene	0.166	0.136	18.1	59	0.00	15.65
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	81	0.00	17.12
101 S	4-bromofluorobenzene (s)	0.814	0.778	4.4	78	0.00	15.80
102 M	bromobenzene	0.664	0.657	1.1	81	0.00	16.02
103 M	1,1,2,2-tetrachloroethane	0.963	0.922	4.3	78	0.00	15.90
104 M	trans-1,4-dichloro-2-bute	0.186	0.164	11.9	70	0.00	15.95
105 M	1,2,3-trichloropropane	0.229	0.234	-2.2	83	0.00	15.99
106 M	n-propylbenzene	3.408	3.361	1.4	81	0.00	16.05
107 M	2-chlorotoluene	0.696	0.714	-2.6	82	0.00	16.21
108 M	4-chlorotoluene	1.798	1.785	0.7	82	0.00	16.32
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.599	1.9	80	0.00	16.22
111 M	tert-butylbenzene	0.540	0.519	3.9	76	0.00	16.62
112 M	1,2,4-trimethylbenzene	2.584	2.541	1.7	79	0.00	16.67
113 M	sec-butylbenzene	3.453	3.452	0.0	78	0.00	16.86
114 M	1,3-dichlorobenzene	1.270	1.290	-1.6	82	0.00	17.05
115 M	p-isopropyltoluene	2.860	2.910	-1.7	80	0.00	16.99
116 M	1,4-dichlorobenzene	1.291	1.316	-1.9	83	0.00	17.14
117 M	1,2-dichlorobenzene	1.390	1.377	0.9	81	0.00	17.58
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.475	1.9	78	0.00	17.45
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.293	-12.7	92	0.00	18.42
122 M	1,3,5-trichlorobenzene	1.316	1.307	0.7	81	0.00	18.65
123	2-ethylhexyl acrylate	0.997	0.540	45.8#	45#	0.00	19.35
124 M	1,2,4-trichlorobenzene	1.141	1.198	-5.0	84	0.00	19.37
125 M	hexachlorobutadiene	0.478	0.505	-5.6	84	0.00	19.52
126 M	naphthalene	2.894	3.425	-18.3	95	0.00	19.69
127 M	1,2,3-trichlorobenzene	1.031	1.199	-16.3	93	0.00	19.96
128 M	hexachloroethane	0.500	0.470	5.9	77	0.00	17.88
129	2-methylnaphthalene	1.134	1.785	-57.4#	127	0.00	20.97
130	ethylenimine			-----NA-----			
131	bis(chloromethyl)ether			-----NA-----			

(#= Out of Range
A240808.D MA9165.MSPCC's out = 0 CCC's out = 0
Thu May 10 23:10:29 20186.9.15
6

MS Volatiles**Raw Data**

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81673.d
 Acq On : 8 May 2018 11:17 pm
 Operator : HueanhT
 Sample : JC65632-1 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:47 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.791	65	136780	500.00	ug/L	0.02
5) pentafluorobenzene	8.773	168	222990	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	297355	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	299695	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	196015	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	108186	54.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	108.22%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	105211	54.46	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	108.92%	
76) toluene-d8 (s)	11.236	98	354180	48.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.56%	
99) 4-bromofluorobenzene (s)	14.102	95	140524	49.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.76%	

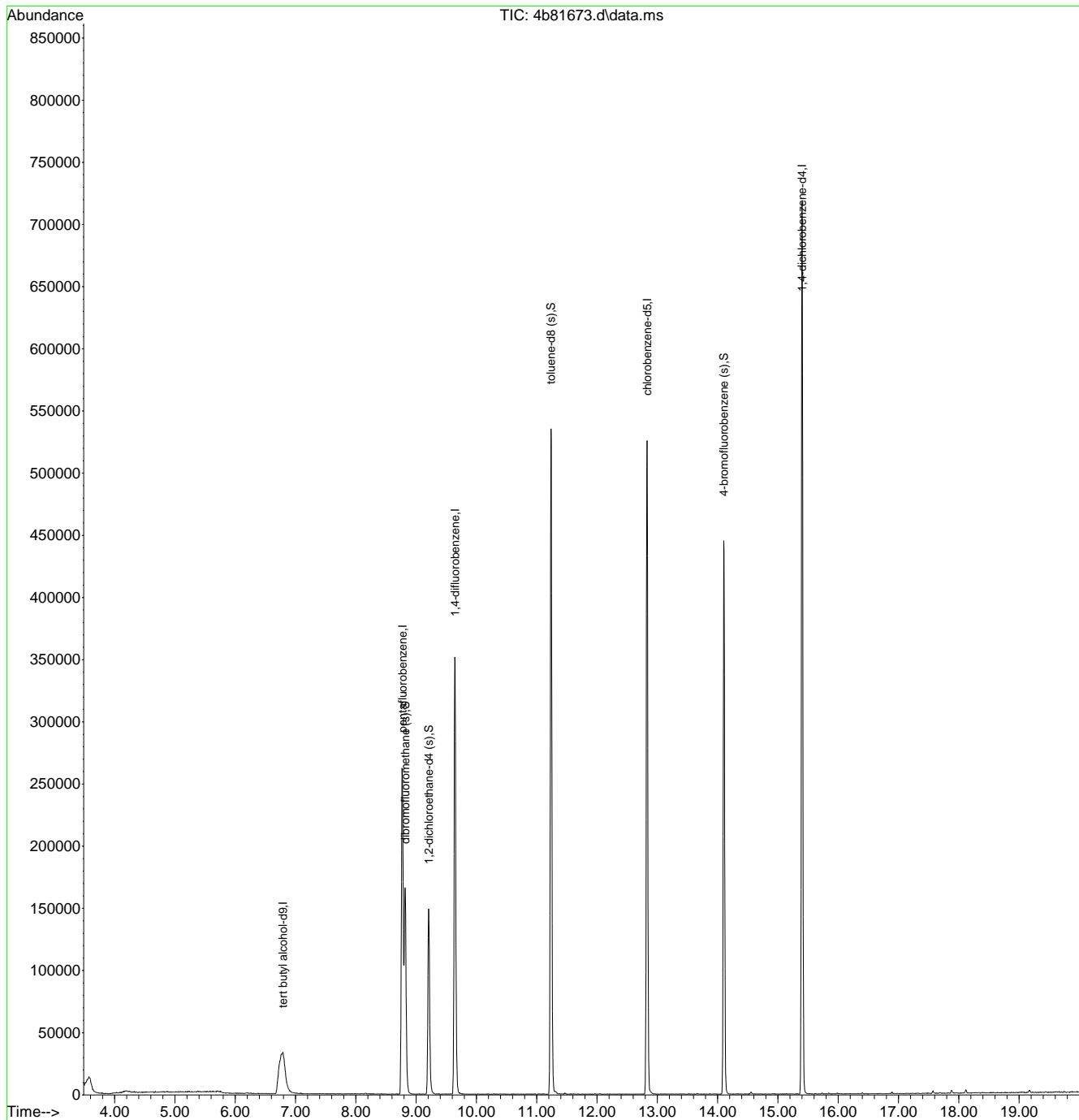
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81673.d
 Acq On : 8 May 2018 11:17 pm
 Operator : HueanhT
 Sample : JC65632-1 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:47 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81674.d
 Acq On : 8 May 2018 11:45 pm
 Operator : HueanhT
 Sample : JC65632-2 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:44:32 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

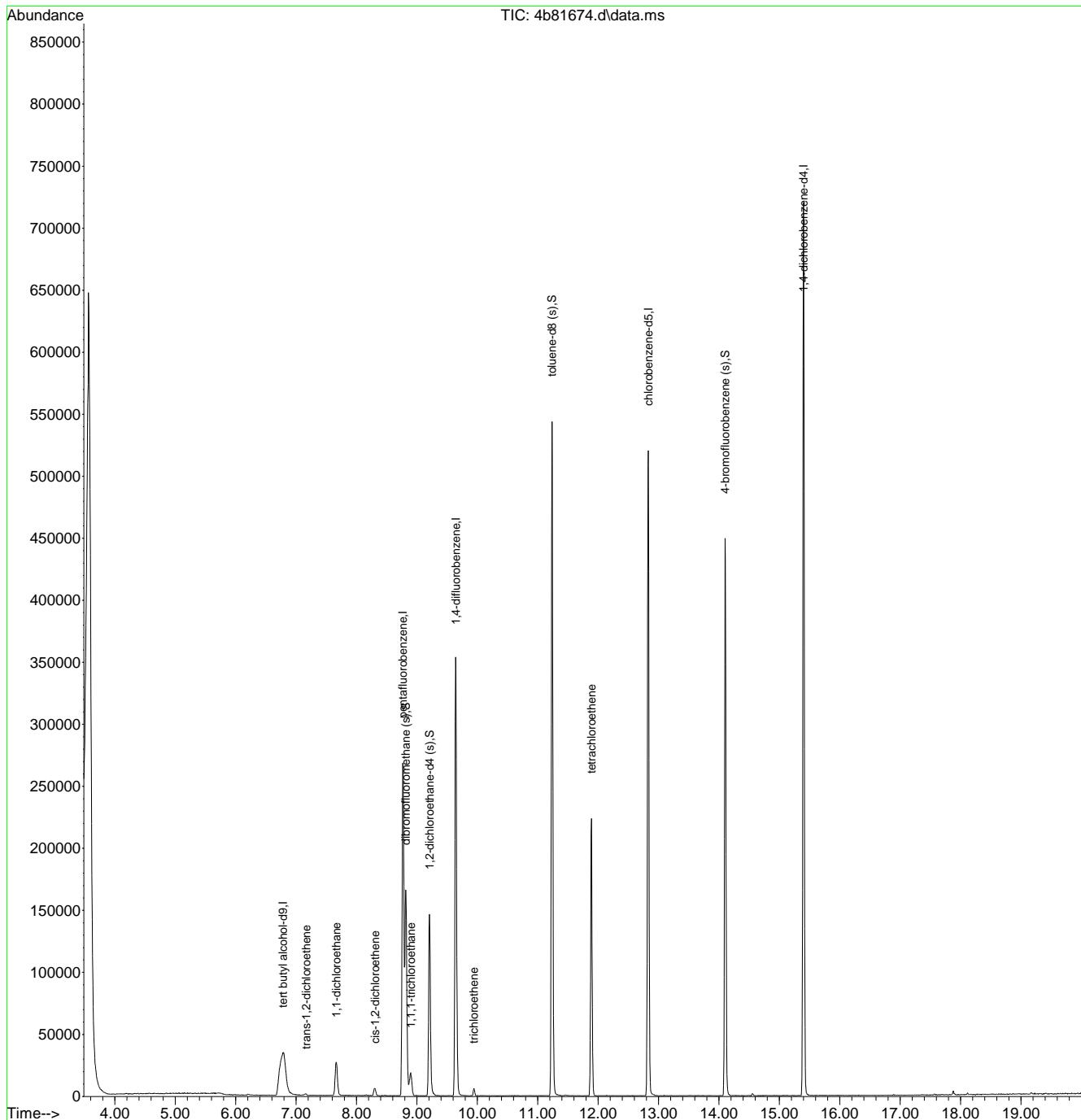
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	137528	500.00	ug/L	0.00
5) pentafluorobenzene	8.768	168	223489	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	295559	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	297476	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	194804	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	108250	54.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	108.04%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	105385	54.88	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.76%	
76) toluene-d8 (s)	11.236	98	354679	49.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.44%	
99) 4-bromofluorobenzene (s)	14.102	95	141380	49.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.98%	
<hr/>						
Target Compounds						
27) trans-1,2-dichloroethene	7.167	61	1032	0.25	ug/L	89
31) 1,1-dichloroethane	7.664	63	38686	7.91	ug/L	98
38) cis-1,2-dichloroethene	8.307	96	3884	1.34	ug/L	82
47) 1,1,1-trichloroethane	8.898	97	16436	3.41	ug/L	96
63) trichloroethene	9.944	95	2115	0.93	ug/L	90
81) tetrachloroethene	11.890	164	53703	24.46	ug/L	98

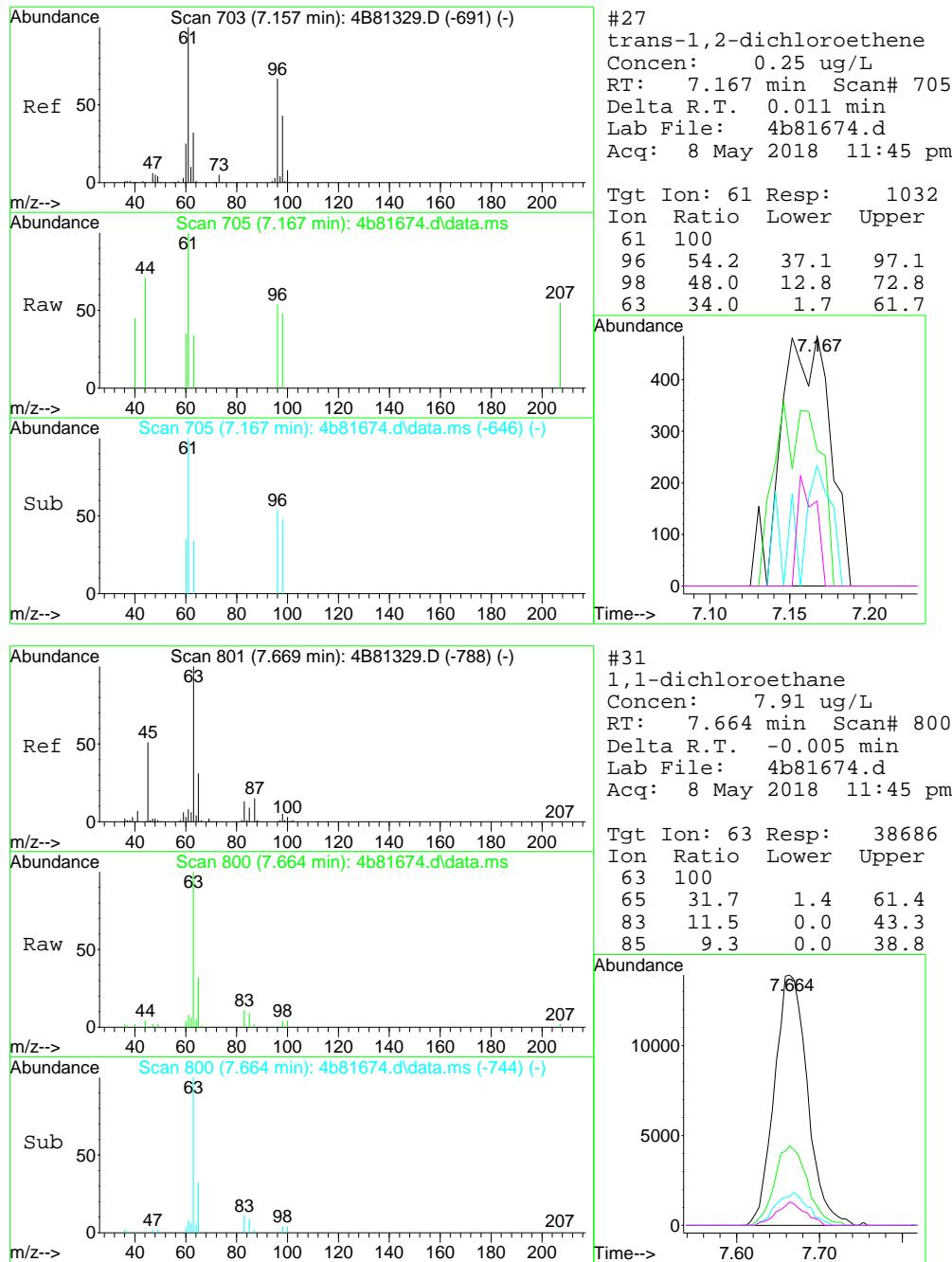
(#) = qualifier out of range (m) = manual integration (+) = signals summed

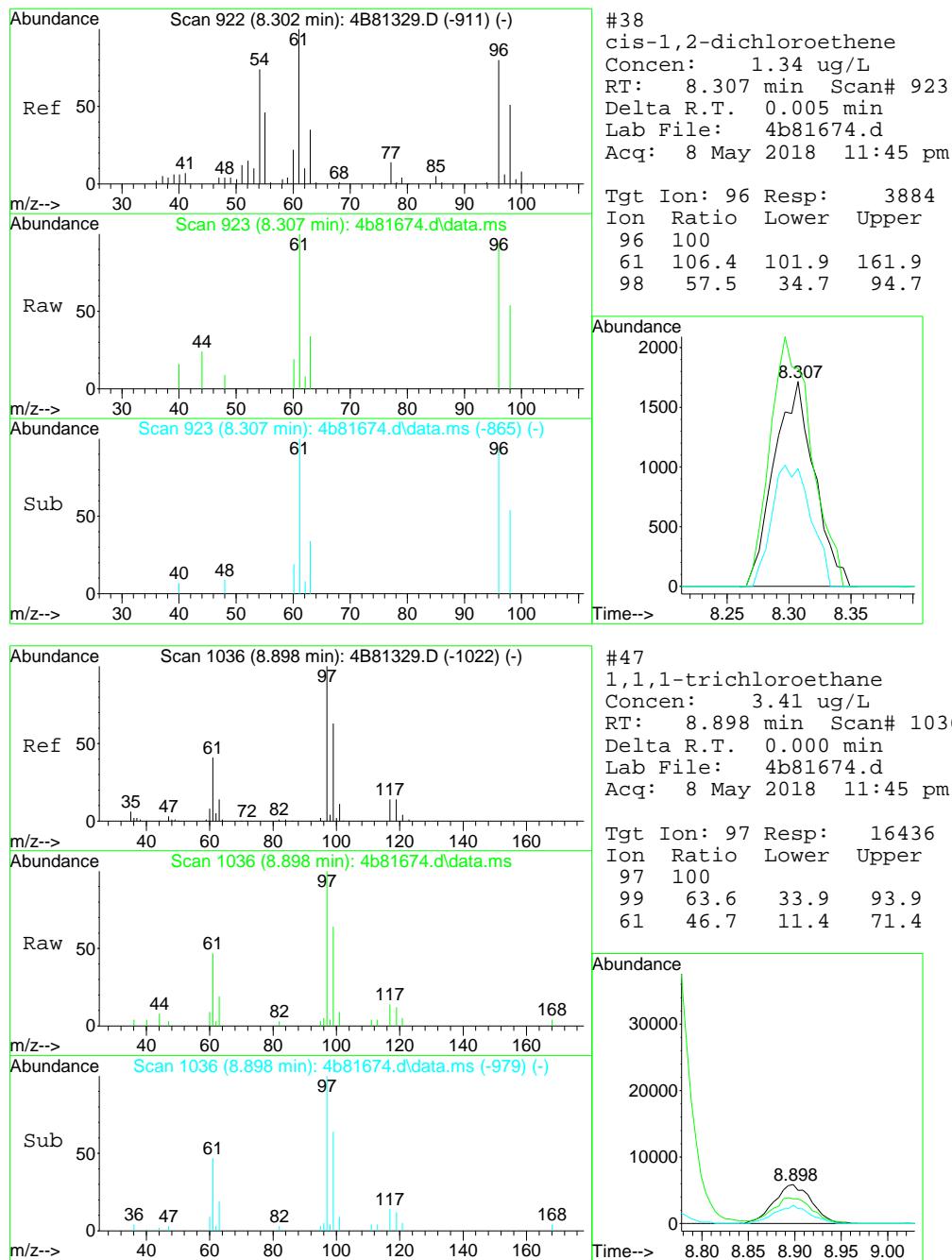
Quantitation Report (QT Reviewed)

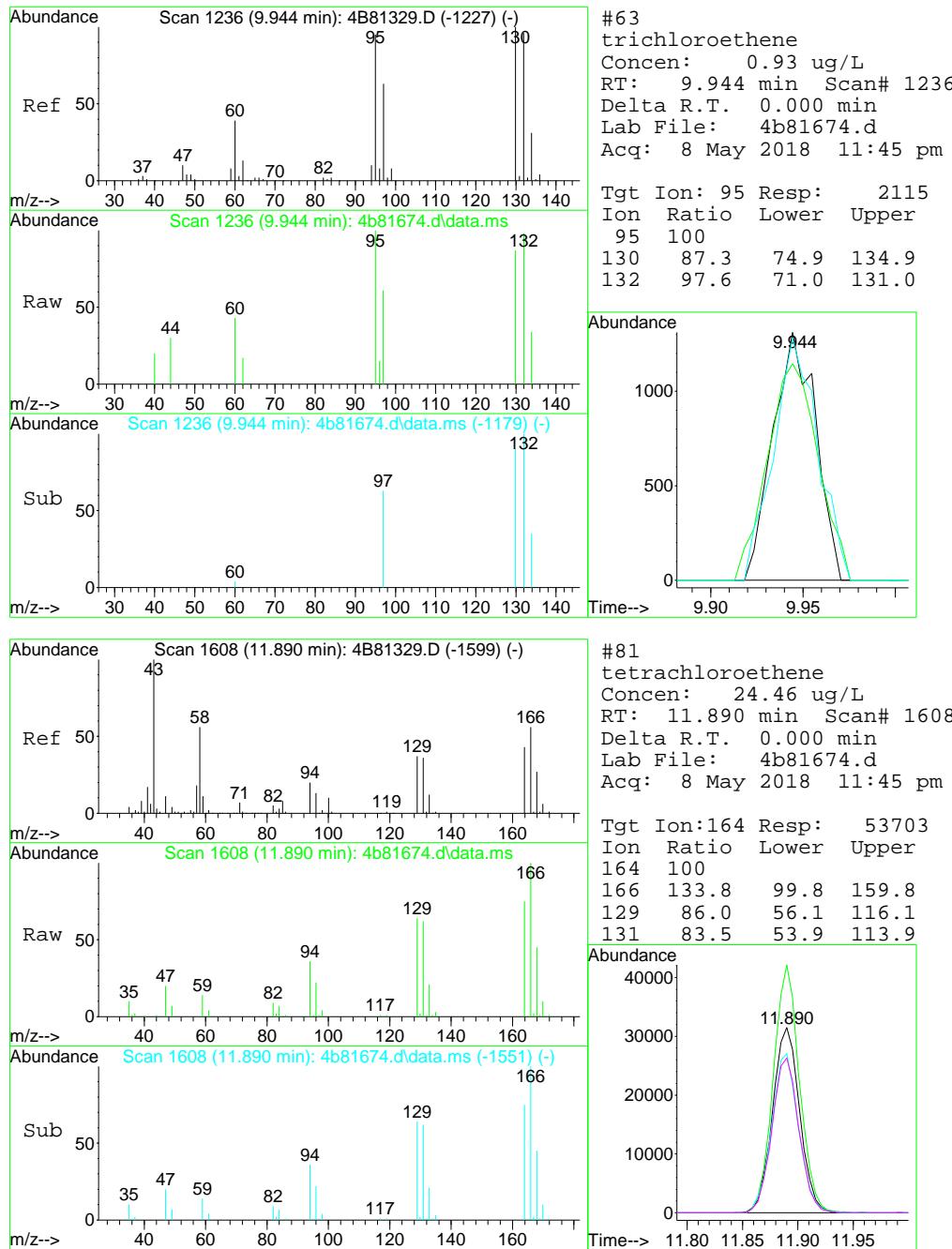
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 Data File : 4b81674.d
 Acq On : 8 May 2018 11:45 pm
 Operator : HueanhT
 Sample : JC65632-2 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:44:32 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81675.d
 Acq On : 9 May 2018 12:13 am
 Operator : HueanhT
 Sample : JC65632-3 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:45:00 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

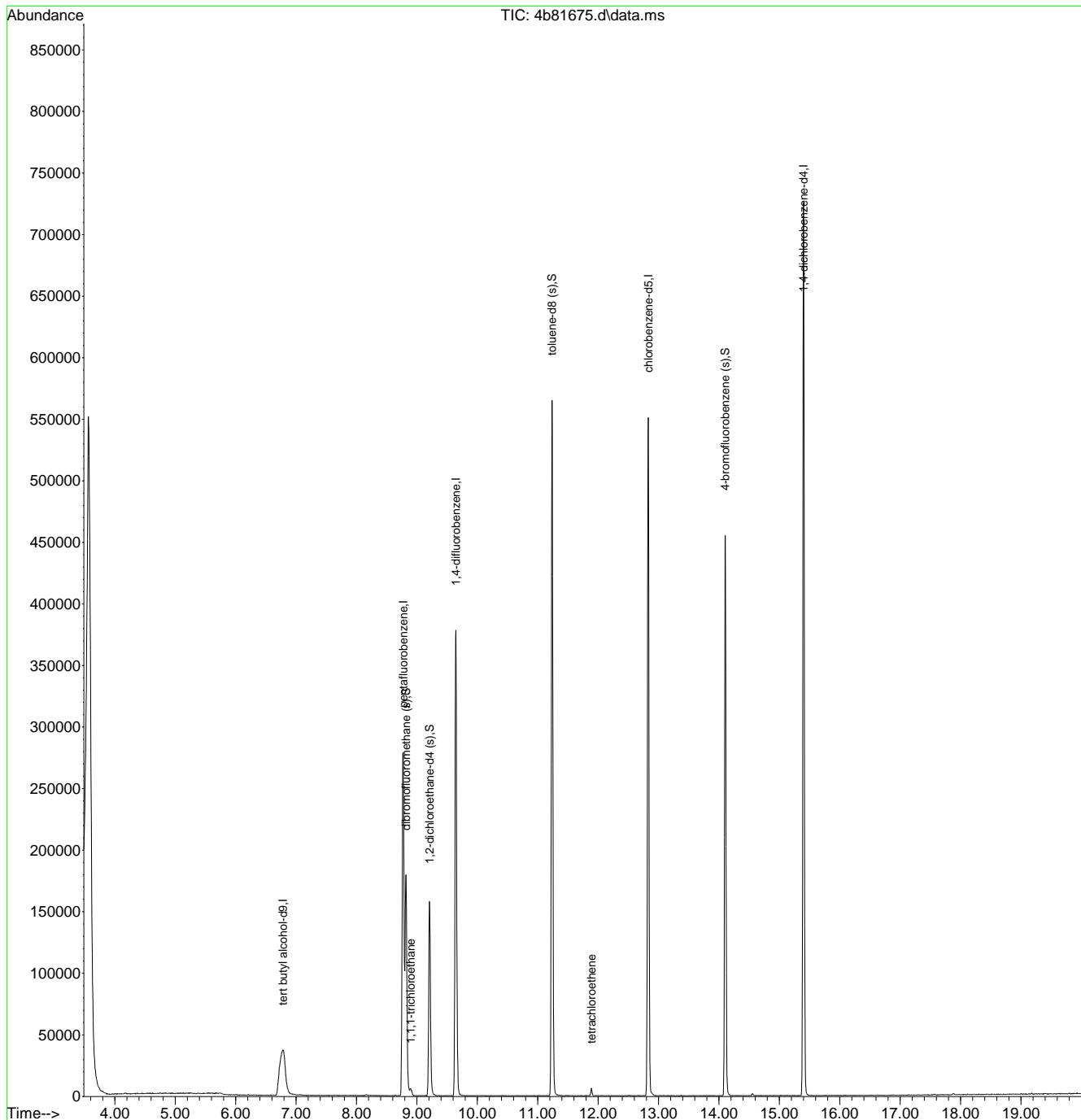
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	139162	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	233922	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	317450	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	313991	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	197510	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	114258	54.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	108.96%	
55) 1,2-dichloroethane-d4 (s)	9.212	65	112418	54.51	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.02%	
76) toluene-d8 (s)	11.236	98	369886	48.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.26%	
99) 4-bromofluorobenzene (s)	14.102	95	144216	50.29	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.58%	
<hr/>						
Target Compounds						
47) 1,1,1-trichloroethane	8.893	97	4863	0.96	ug/L	95
81) tetrachloroethene	11.890	164	1446	0.62	ug/L	96

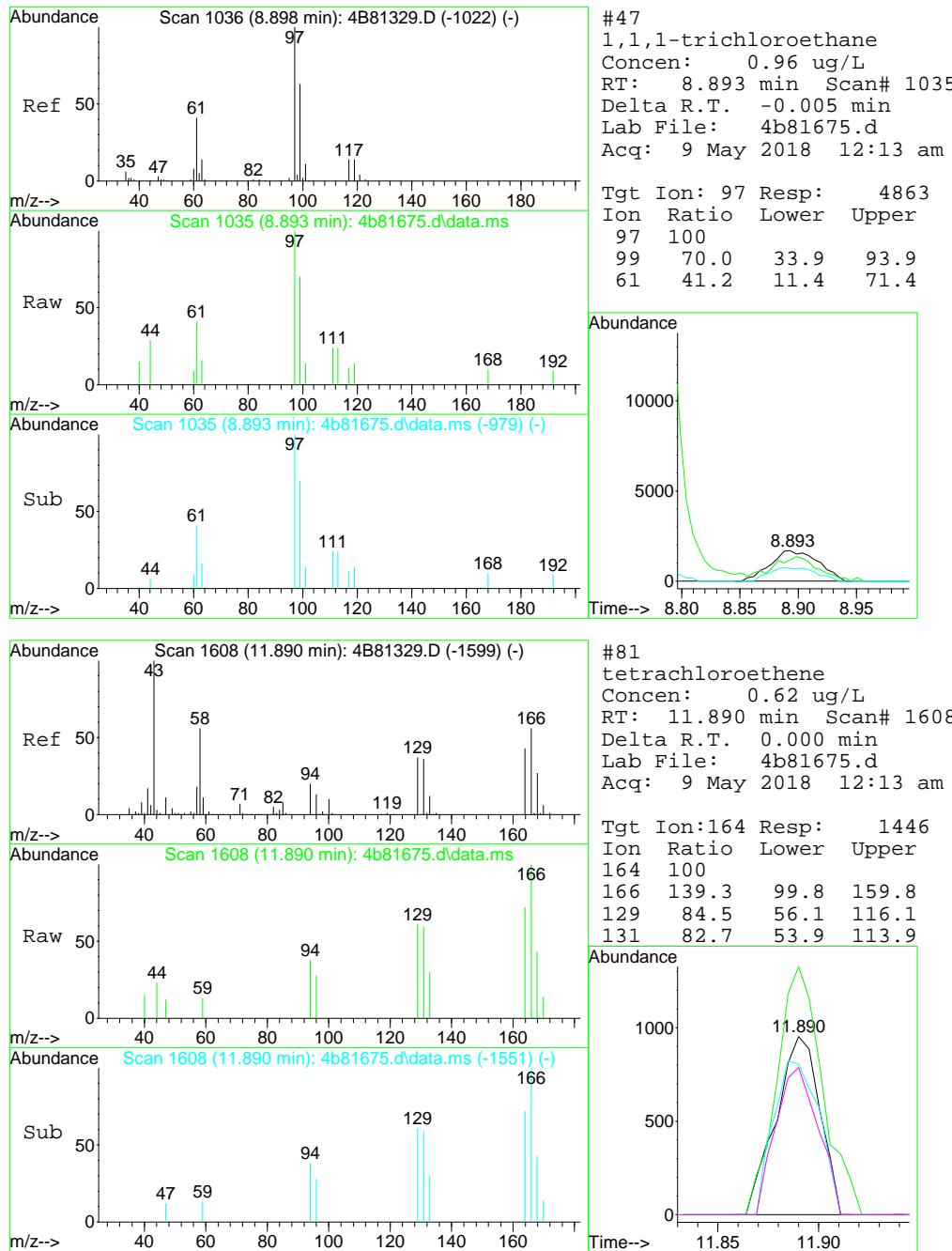
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81675.d
 Acq On : 9 May 2018 12:13 am
 Operator : HueanhT
 Sample : JC65632-3 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:45:00 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81676.d
 Acq On : 9 May 2018 12:41 am
 Operator : HueanhT
 Sample : JC65632-4 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:45:43 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

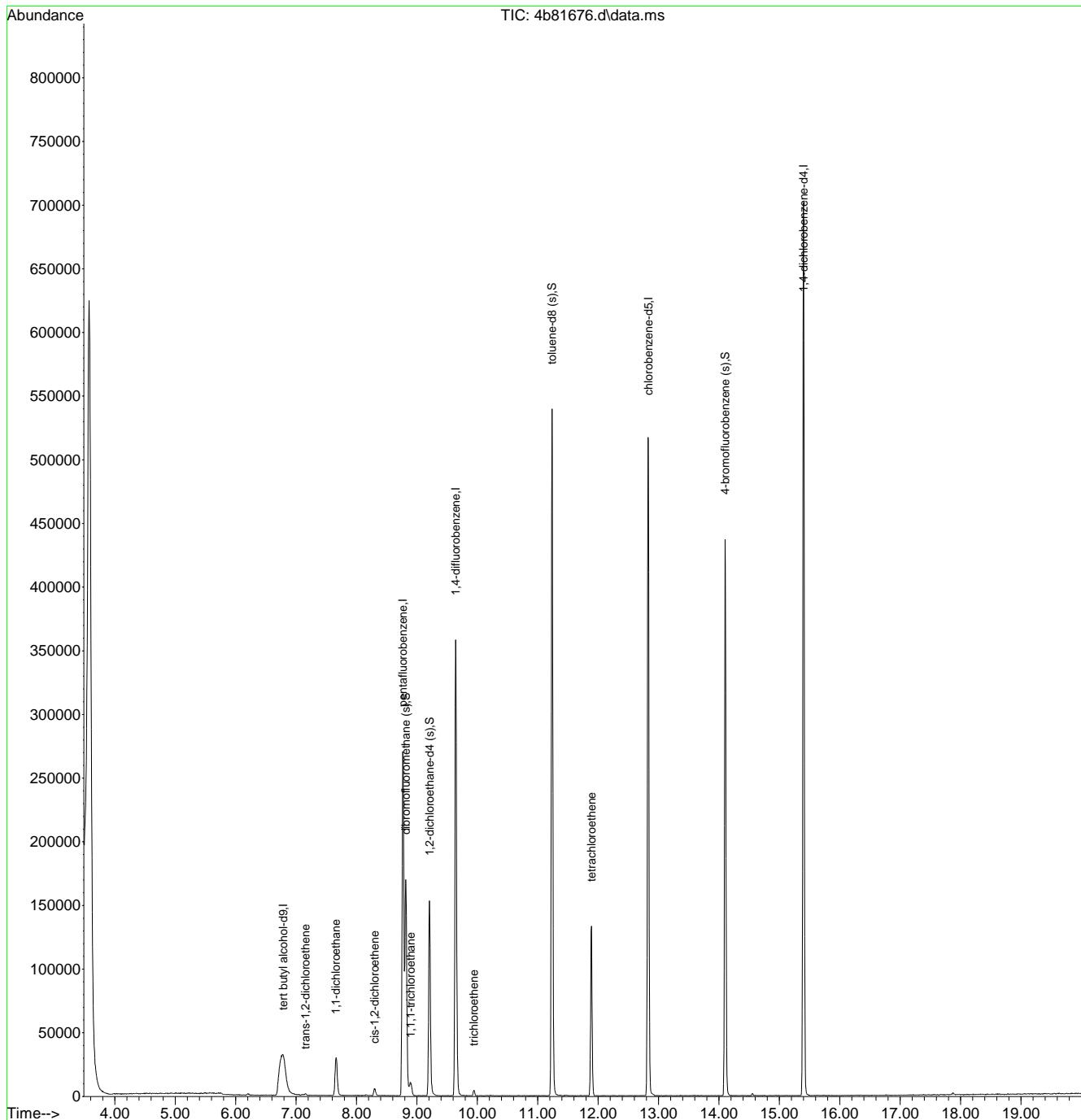
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	134939	500.00	ug/L	0.01
5) pentafluorobenzene	8.768	168	218717	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	298529	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	294521	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	190554	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	109066	55.62	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 111.24%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	107997	55.68	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 111.36%		
76) toluene-d8 (s)	11.236	98	351935	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.66%		
99) 4-bromofluorobenzene (s)	14.103	95	137785	49.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.60%		
<hr/>						
Target Compounds						
27) trans-1,2-dichloroethene	7.157	61	898	0.22	ug/L	# 80
31) 1,1-dichloroethane	7.659	63	41267	8.63	ug/L	98
38) cis-1,2-dichloroethene	8.297	96	2997	1.06	ug/L	93
47) 1,1,1-trichloroethane	8.893	97	9417	2.00	ug/L	94
63) trichloroethene	9.939	95	1773	0.77	ug/L	82
81) tetrachloroethene	11.890	164	32361	14.89	ug/L	99
<hr/>						

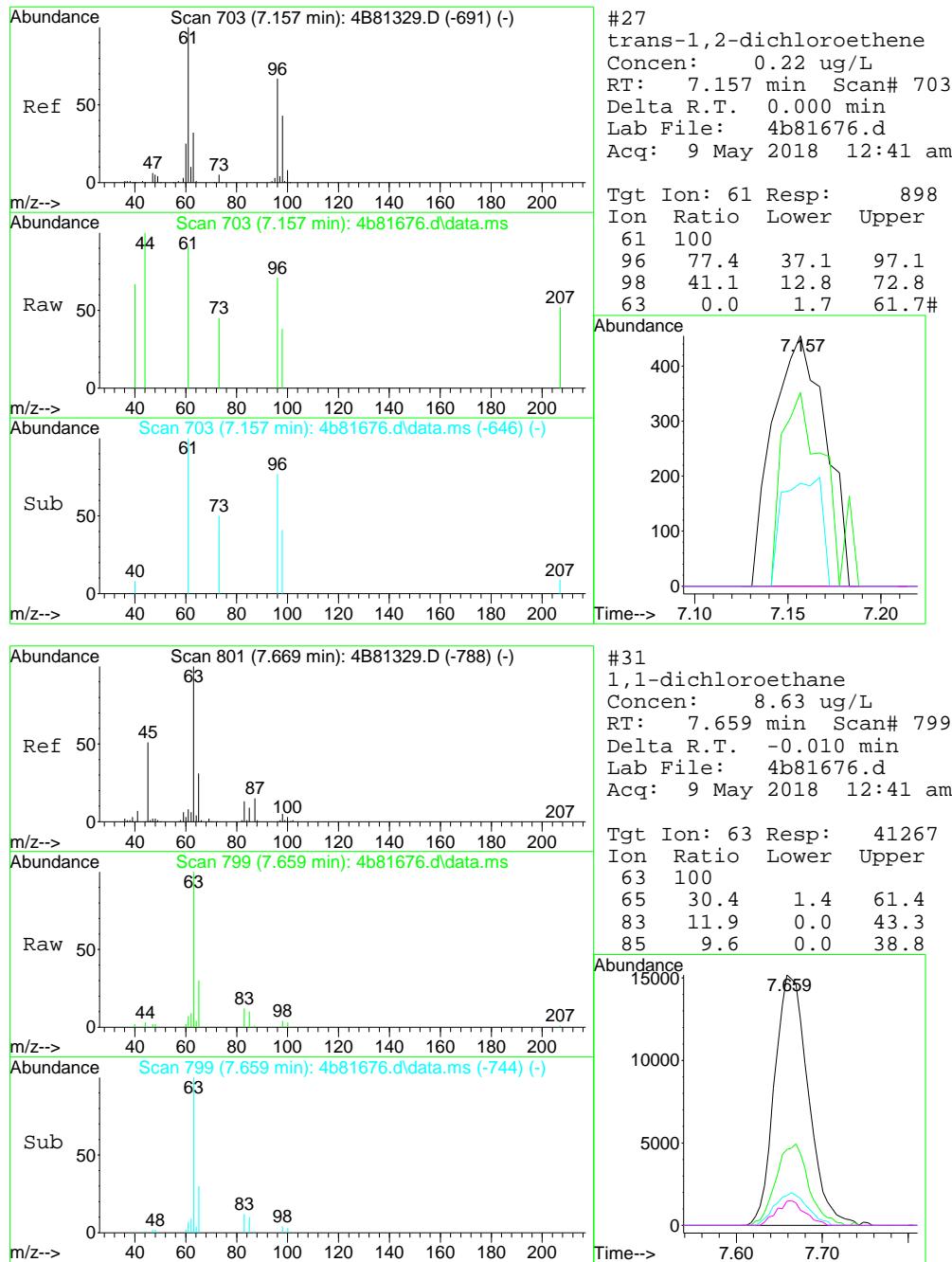
(#) = qualifier out of range (m) = manual integration (+) = signals summed

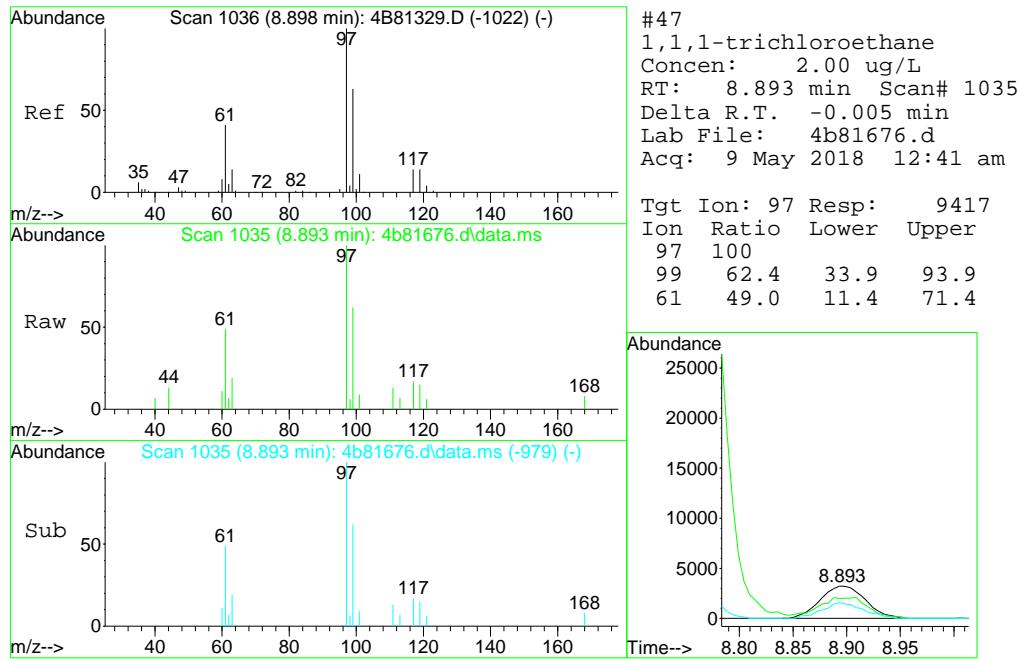
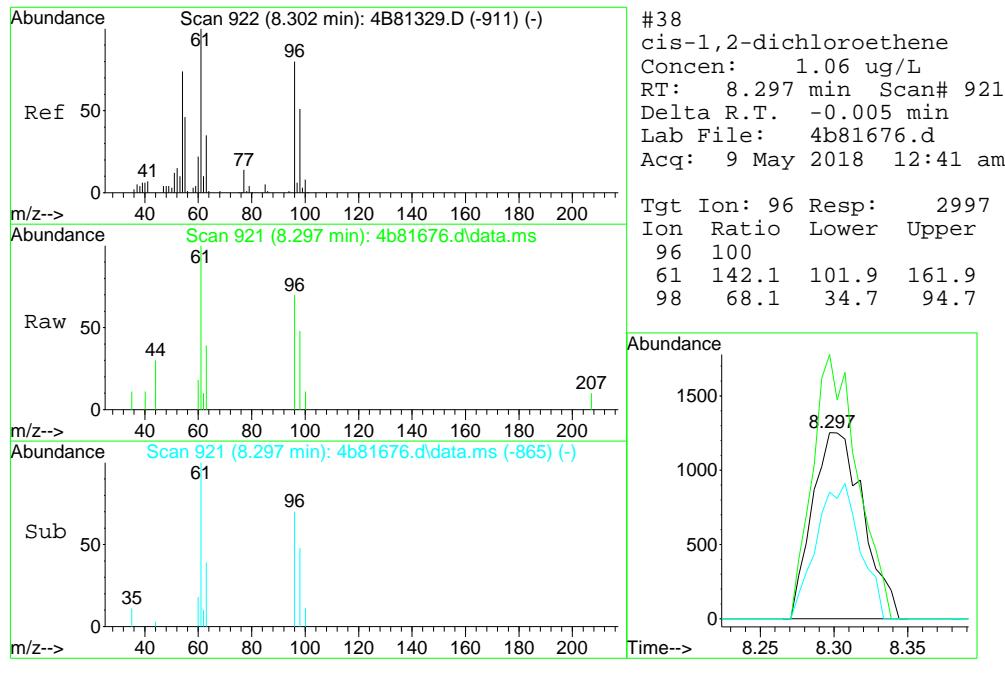
Quantitation Report (QT Reviewed)

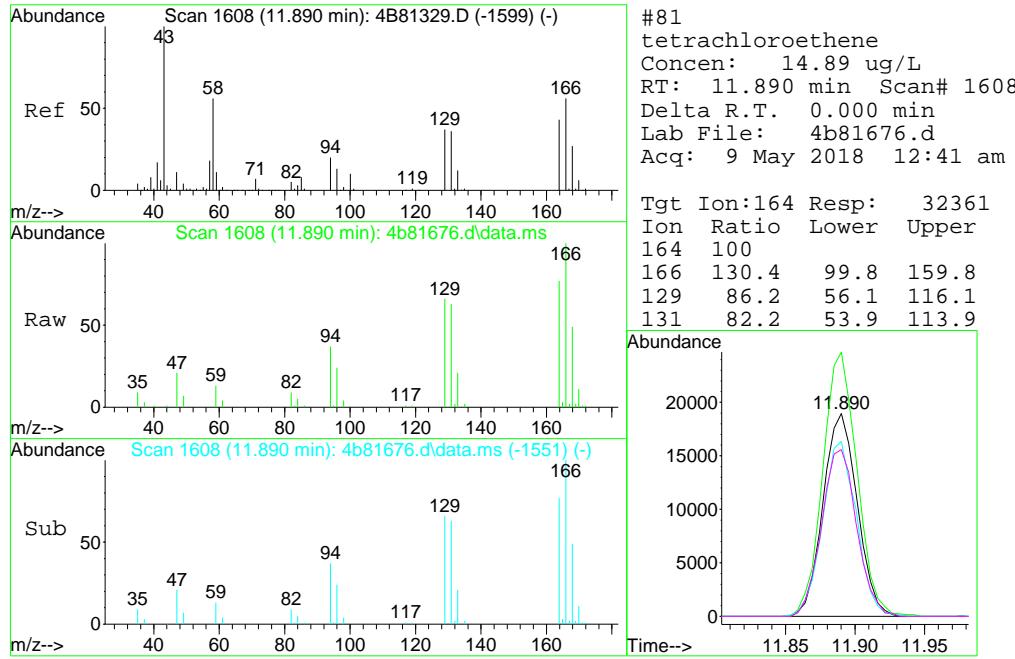
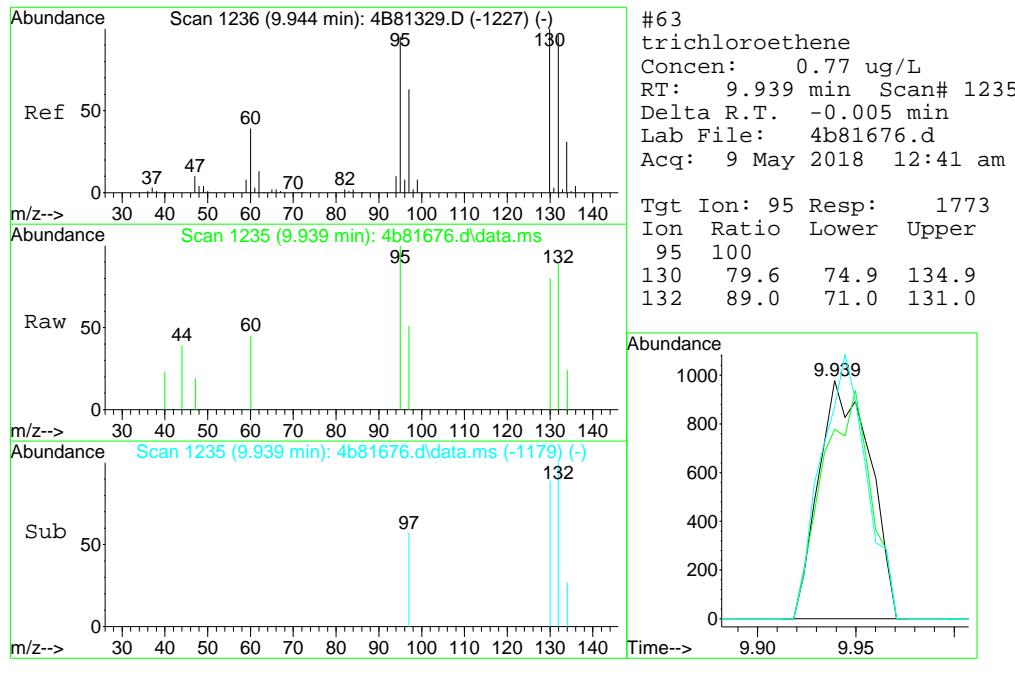
Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81676.d
 Acq On : 9 May 2018 12:41 am
 Operator : HueanhT
 Sample : JC65632-4 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:45:43 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81677.d
 Acq On : 9 May 2018 1:09 am
 Operator : HueanhT
 Sample : JC65632-5 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:46:16 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

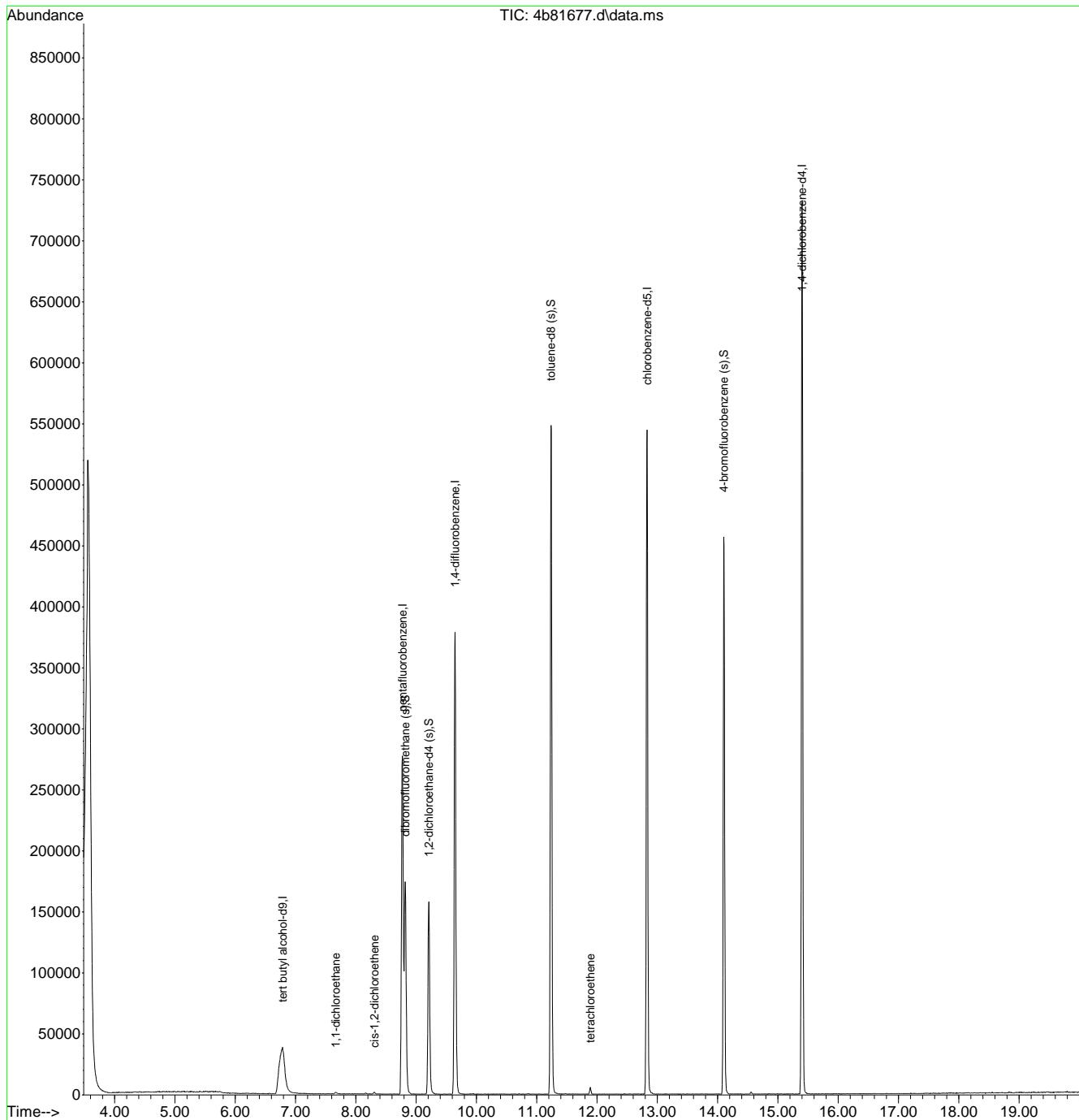
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	138713	500.00	ug/L	0.01
5) pentafluorobenzene	8.773	168	228860	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	313417	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	308792	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	198661	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	113708	55.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 110.82%		
55) 1,2-dichloroethane-d4 (s)	9.212	65	112241	55.12	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 110.24%		
76) toluene-d8 (s)	11.236	98	370355	49.51	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.02%		
99) 4-bromofluorobenzene (s)	14.102	95	144966	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.52%		
<hr/>						
Target Compounds						
31) 1,1-dichloroethane	7.669	63	2267	0.45	ug/L	86
38) cis-1,2-dichloroethene	8.307	96	753	0.25	ug/L	82
81) tetrachloroethene	11.890	164	1517	0.67	ug/L	82

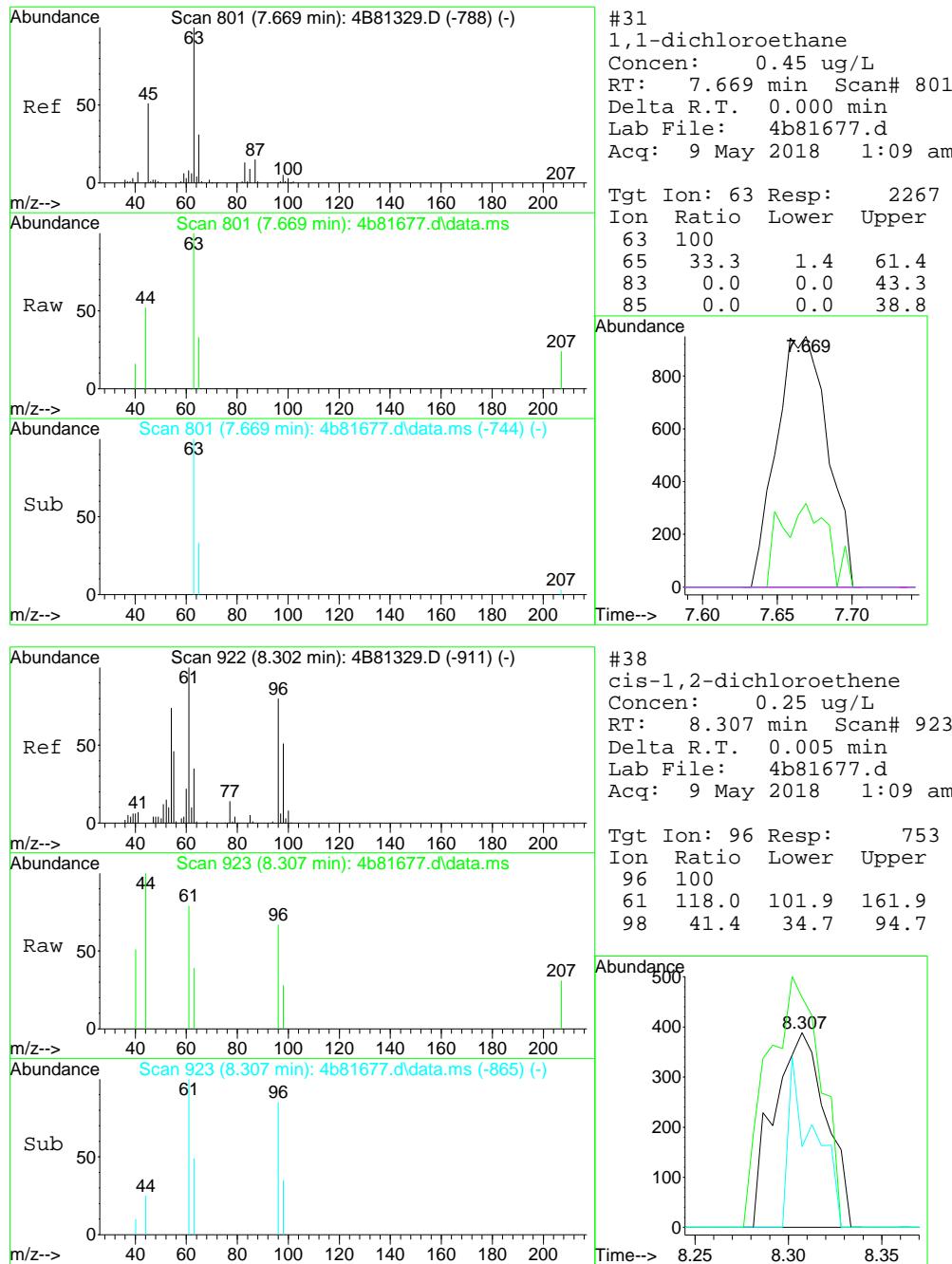
(#) = qualifier out of range (m) = manual integration (+) = signals summed

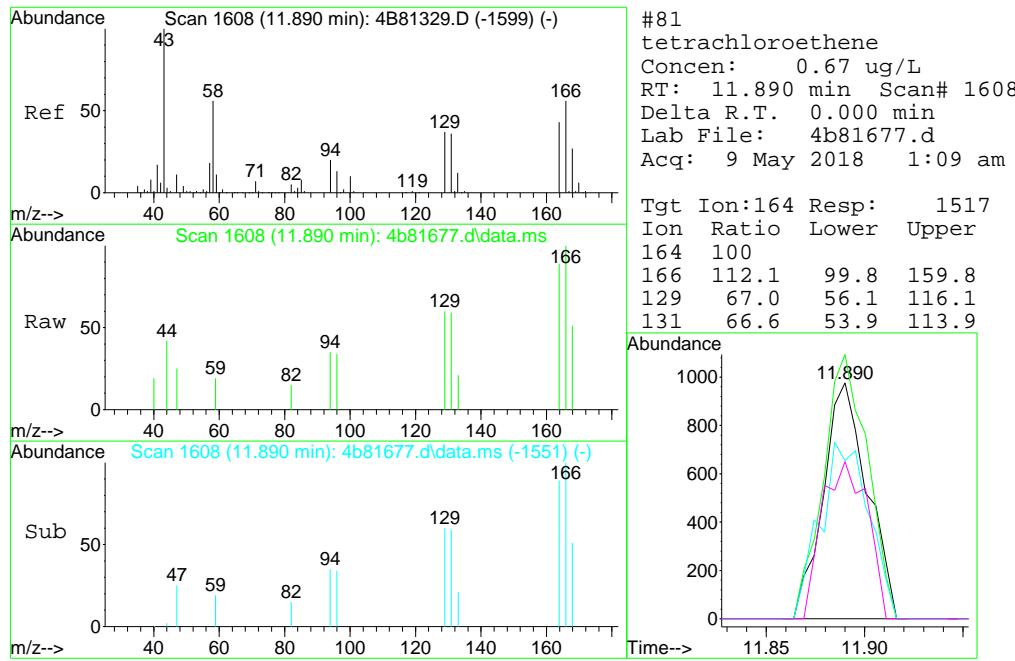
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81677.d
 Acq On : 9 May 2018 1:09 am
 Operator : HueanhT
 Sample : JC65632-5 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:46:16 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81678.d
 Acq On : 9 May 2018 1:37 am
 Operator : HueanhT
 Sample : JC65632-6 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:46:41 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

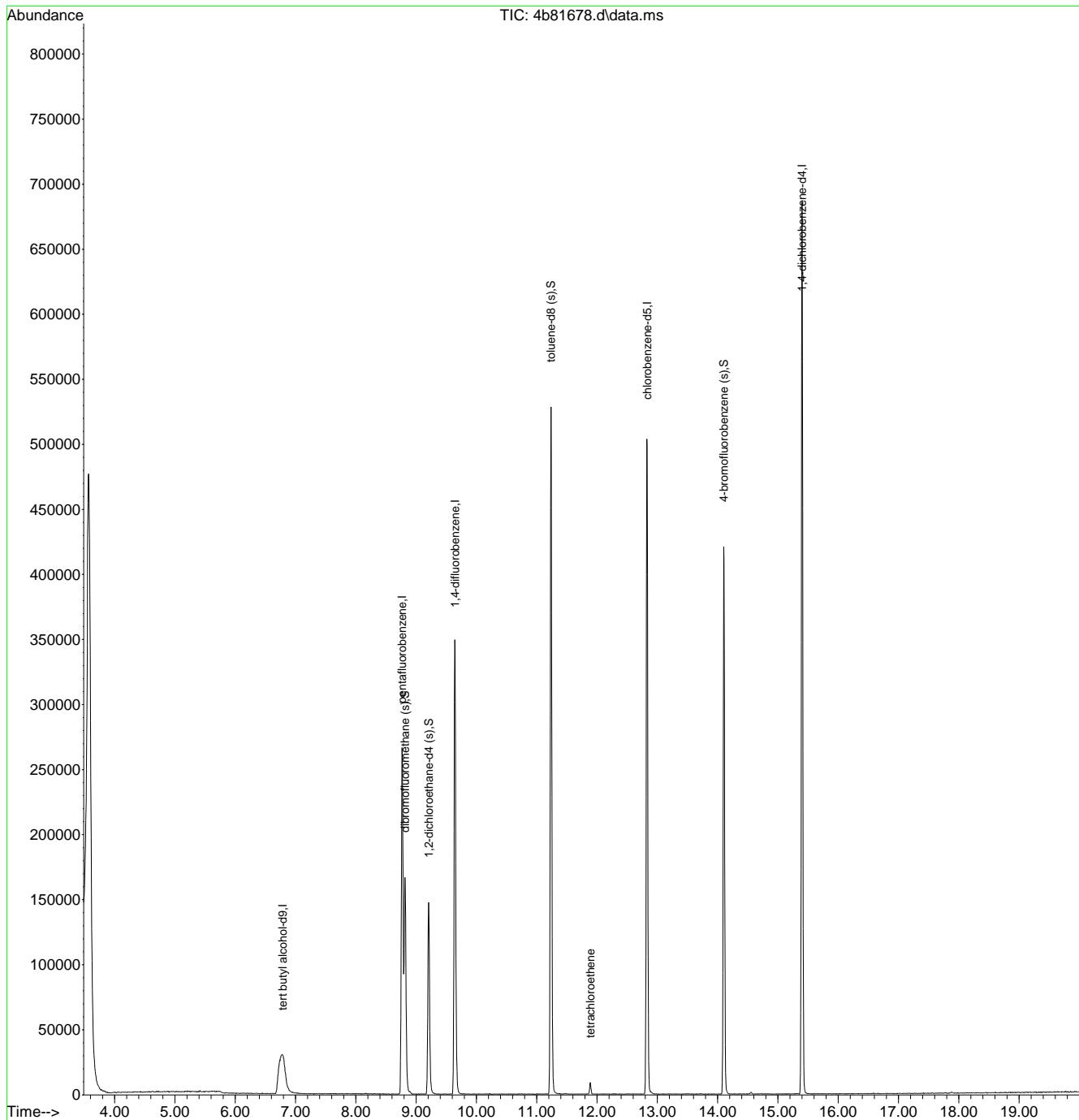
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	127255	500.00	ug/L	0.01
5) pentafluorobenzene	8.768	168	213464	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	289287	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	286877	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	184349	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	104851	54.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	109.56%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	104490	55.60	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	111.20%	
76) toluene-d8 (s)	11.236	98	342981	49.35	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.70%	
99) 4-bromofluorobenzene (s)	14.102	95	132128	49.37	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.74%	
<hr/>						
Target Compounds						
81) tetrachloroethene	11.890	164	2160	1.02	ug/L	92
<hr/>						

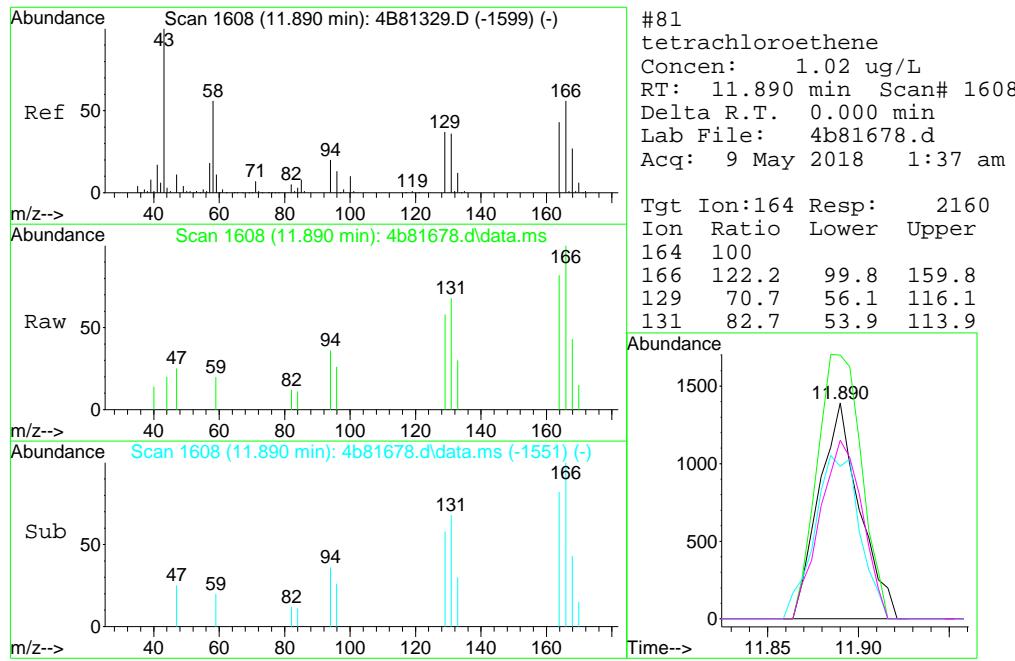
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81678.d
 Acq On : 9 May 2018 1:37 am
 Operator : HueanhT
 Sample : JC65632-6 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:46:41 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81679.d
 Acq On : 9 May 2018 2:05 am
 Operator : HueanhT
 Sample : JC65632-7 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:47:17 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

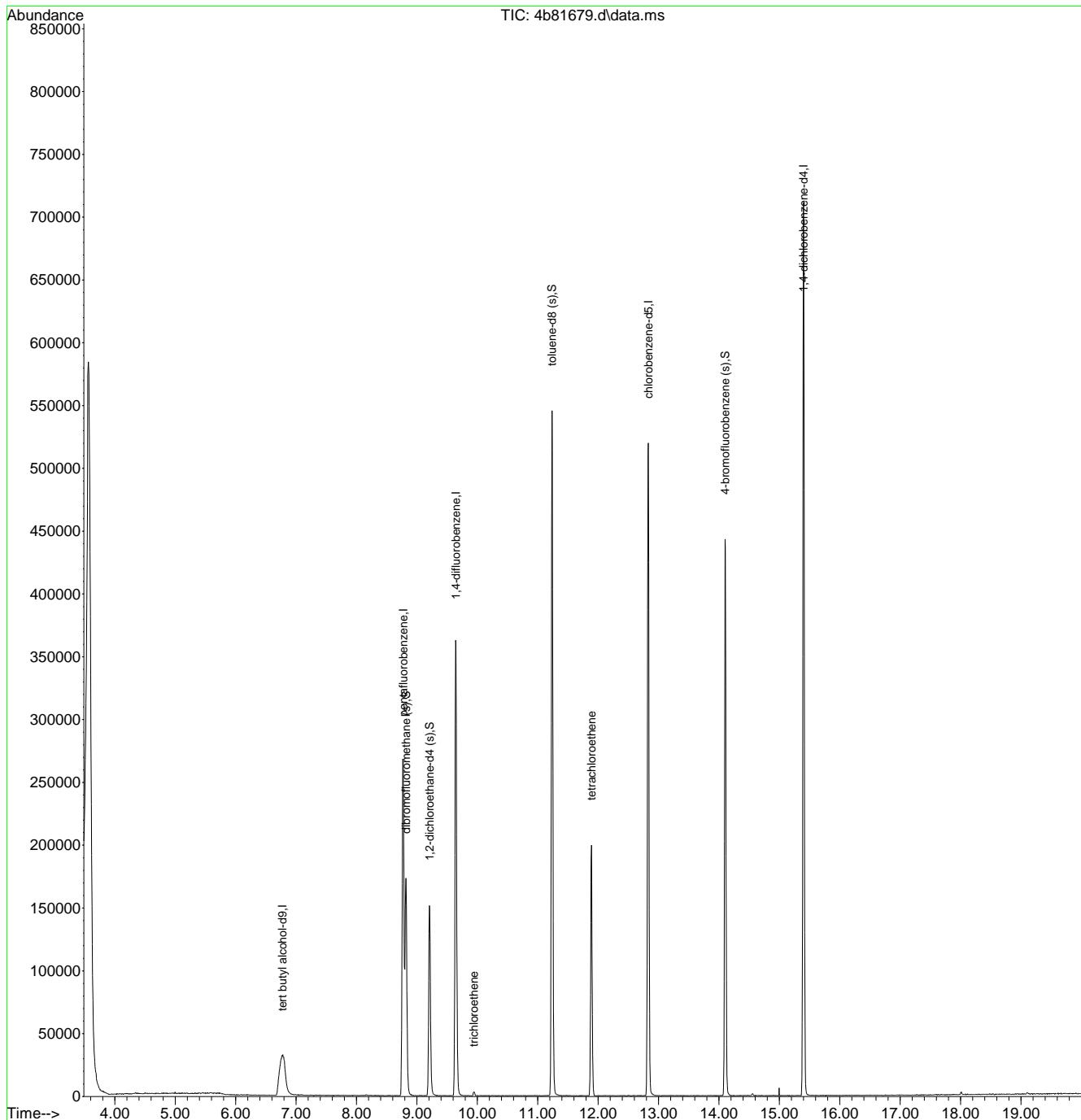
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.775	65	119671	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	219407	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	301849	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	296528	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	188846	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	110939	56.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	112.78%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	108574	55.36	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.72%	
76) toluene-d8 (s)	11.236	98	358158	49.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.72%	
99) 4-bromofluorobenzene (s)	14.102	95	138204	50.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.82%	
<hr/>						
Target Compounds						
63) trichloroethene	9.944	95	1151	0.50	ug/L	94
81) tetrachloroethene	11.890	164	47636	21.77	ug/L	97
<hr/>						

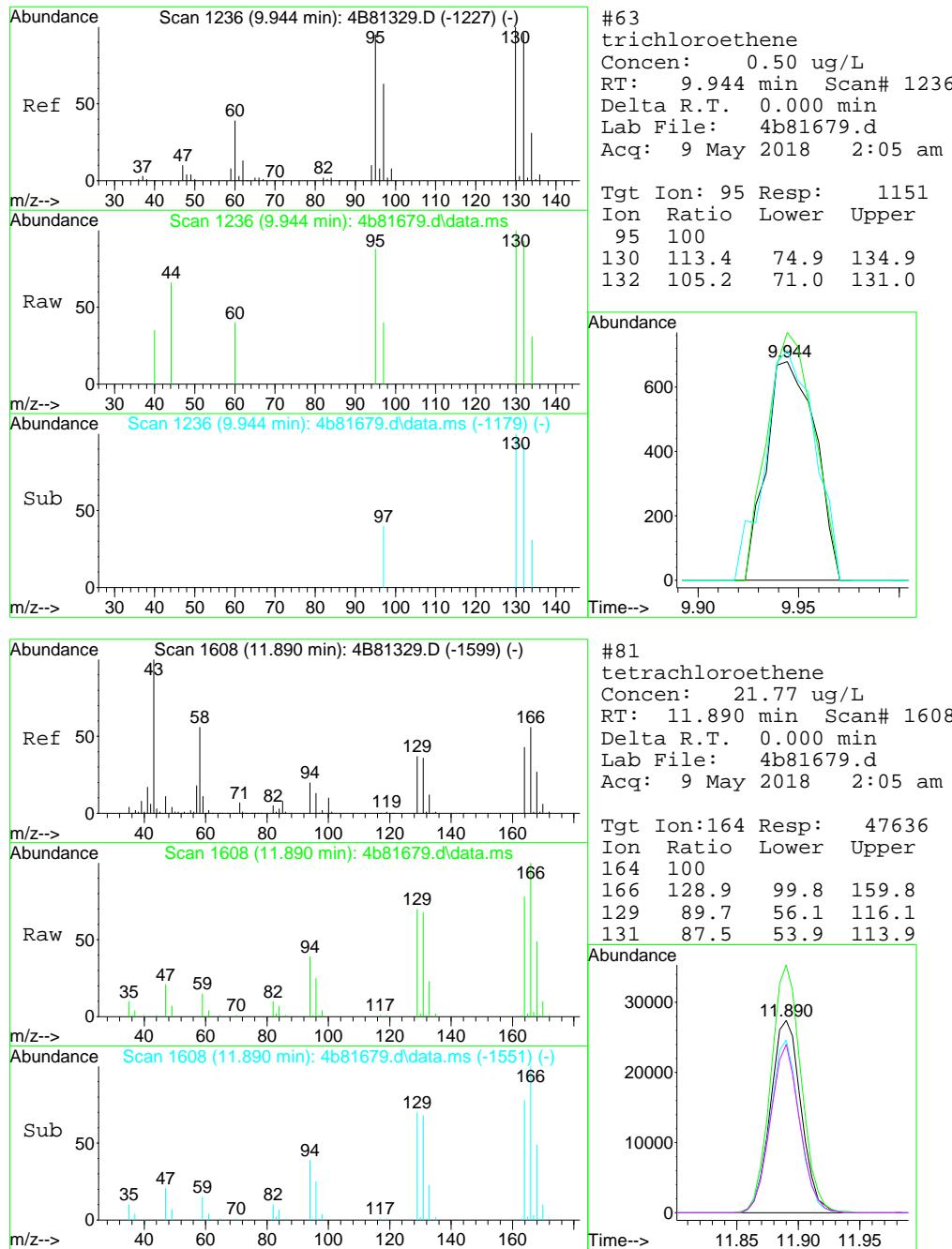
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81679.d
 Acq On : 9 May 2018 2:05 am
 Operator : HueanhT
 Sample : JC65632-7 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:47:17 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81680.d
 Acq On : 9 May 2018 2:33 am
 Operator : HueanhT
 Sample : JC65632-8 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:48:02 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

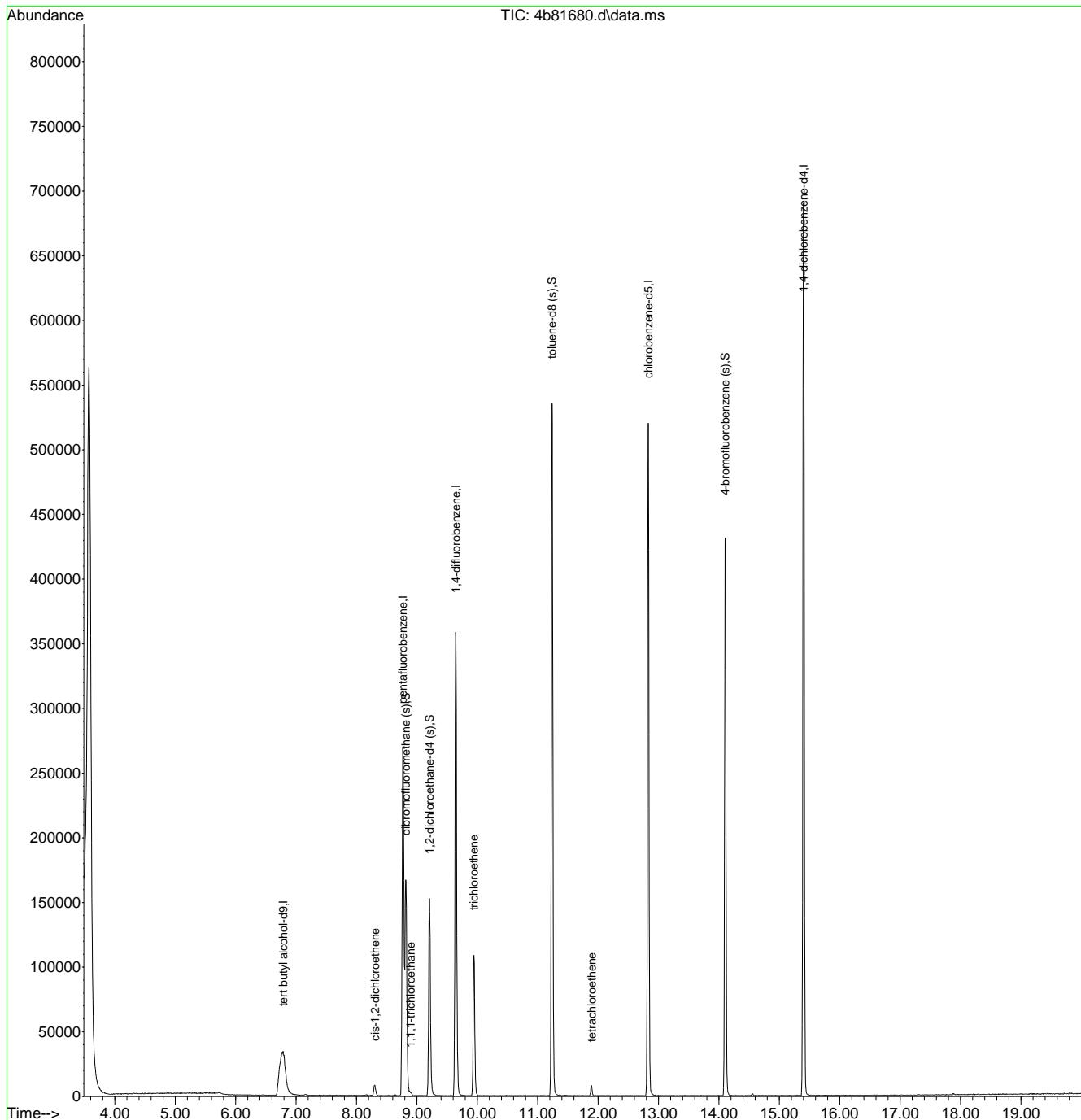
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	129562	500.00	ug/L	0.01
5) pentafluorobenzene	8.768	168	216933	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	300384	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	293956	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	185382	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	108433	55.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 111.50%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	107604	55.14	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 110.28%		
76) toluene-d8 (s)	11.236	98	350394	49.20	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.40%		
99) 4-bromofluorobenzene (s)	14.102	95	134878	50.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.22%		
<hr/>						
Target Compounds						
38) cis-1,2-dichloroethene	8.307	96	4764	1.70	ug/L	88
47) 1,1,1-trichloroethane	8.893	97	1780	0.38	ug/L	94
63) trichloroethene	9.944	95	35955	15.61	ug/L	95
81) tetrachloroethene	11.895	164	2310	1.06	ug/L #	80

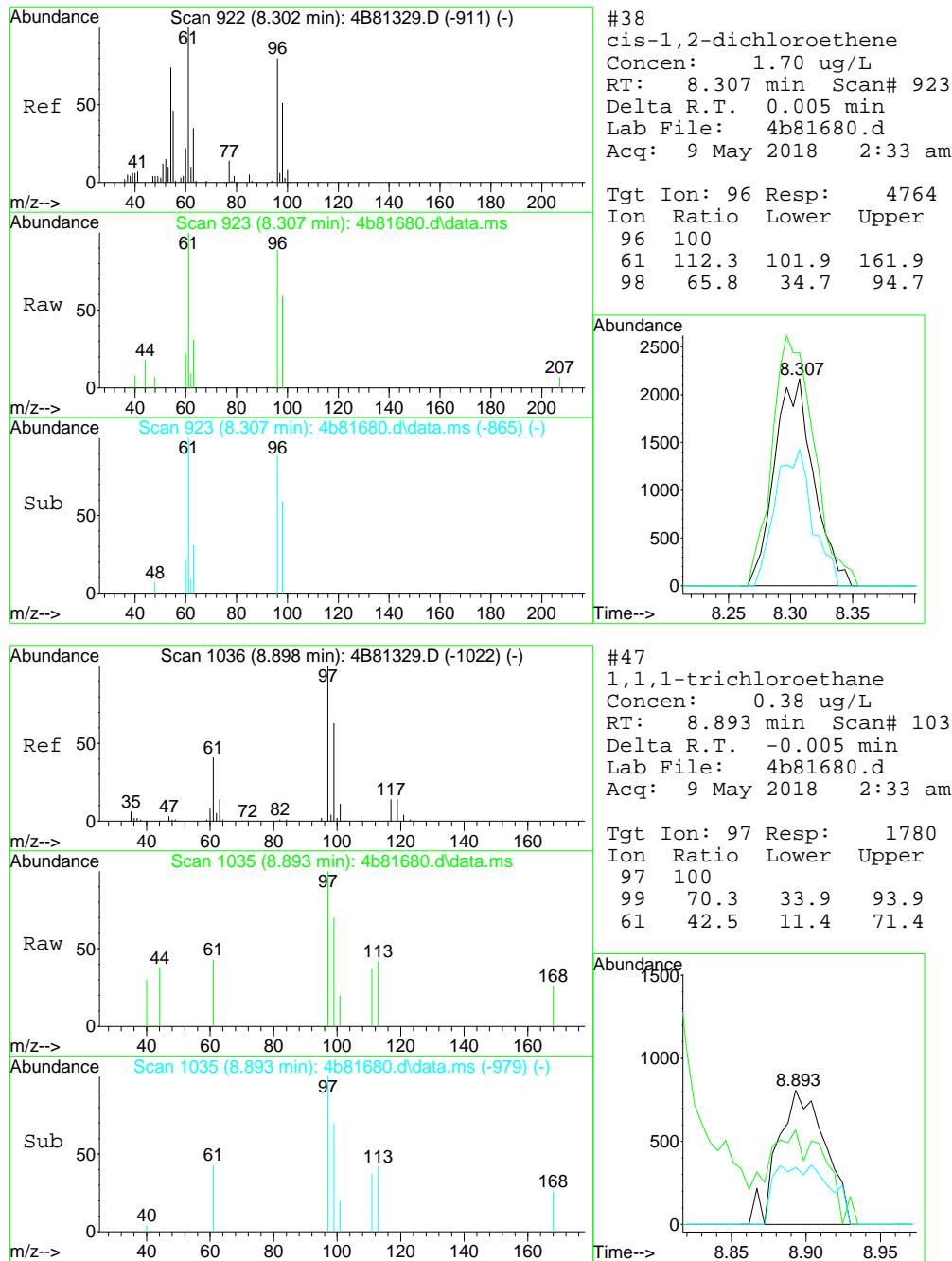
(#) = qualifier out of range (m) = manual integration (+) = signals summed

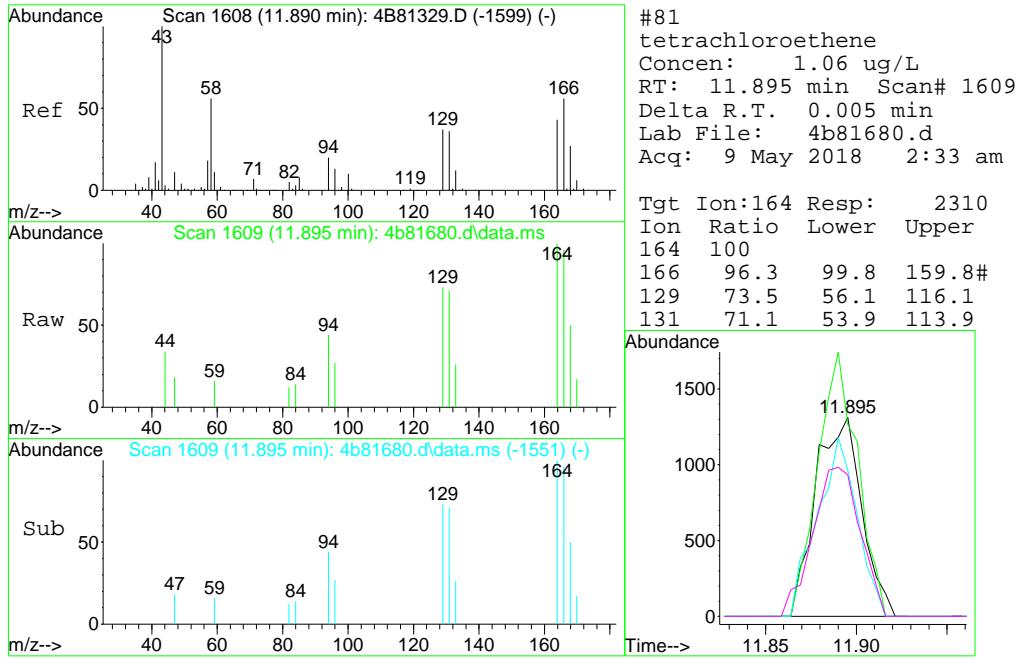
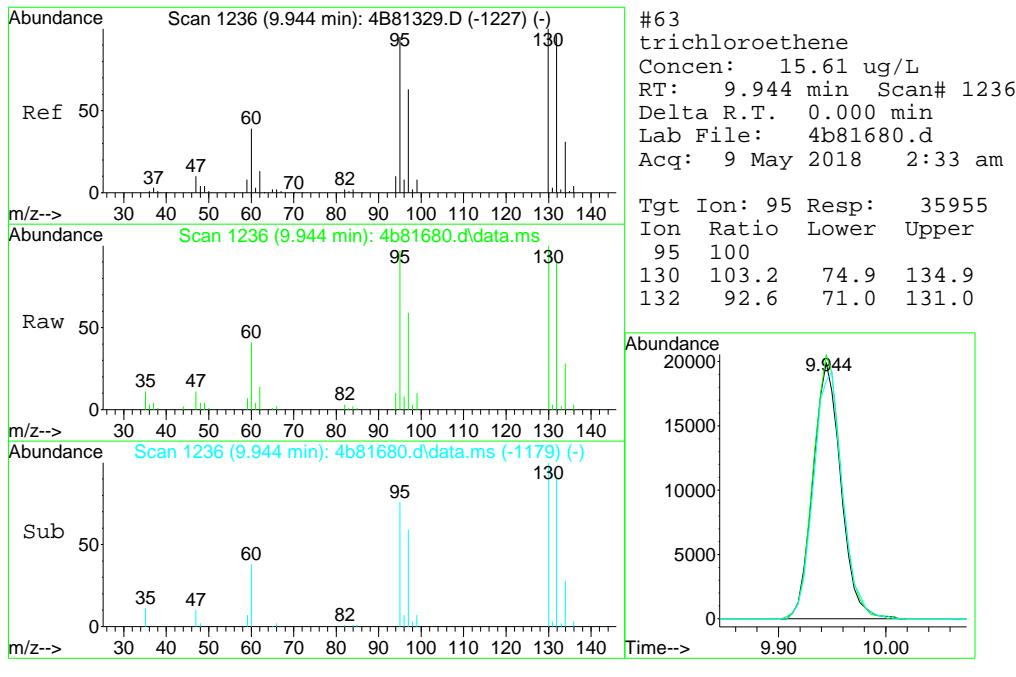
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81680.d
 Acq On : 9 May 2018 2:33 am
 Operator : HueanhT
 Sample : JC65632-8 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:48:02 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81681.d
 Acq On : 9 May 2018 3:01 am
 Operator : HueanhT
 Sample : JC65632-9 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:49:23 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

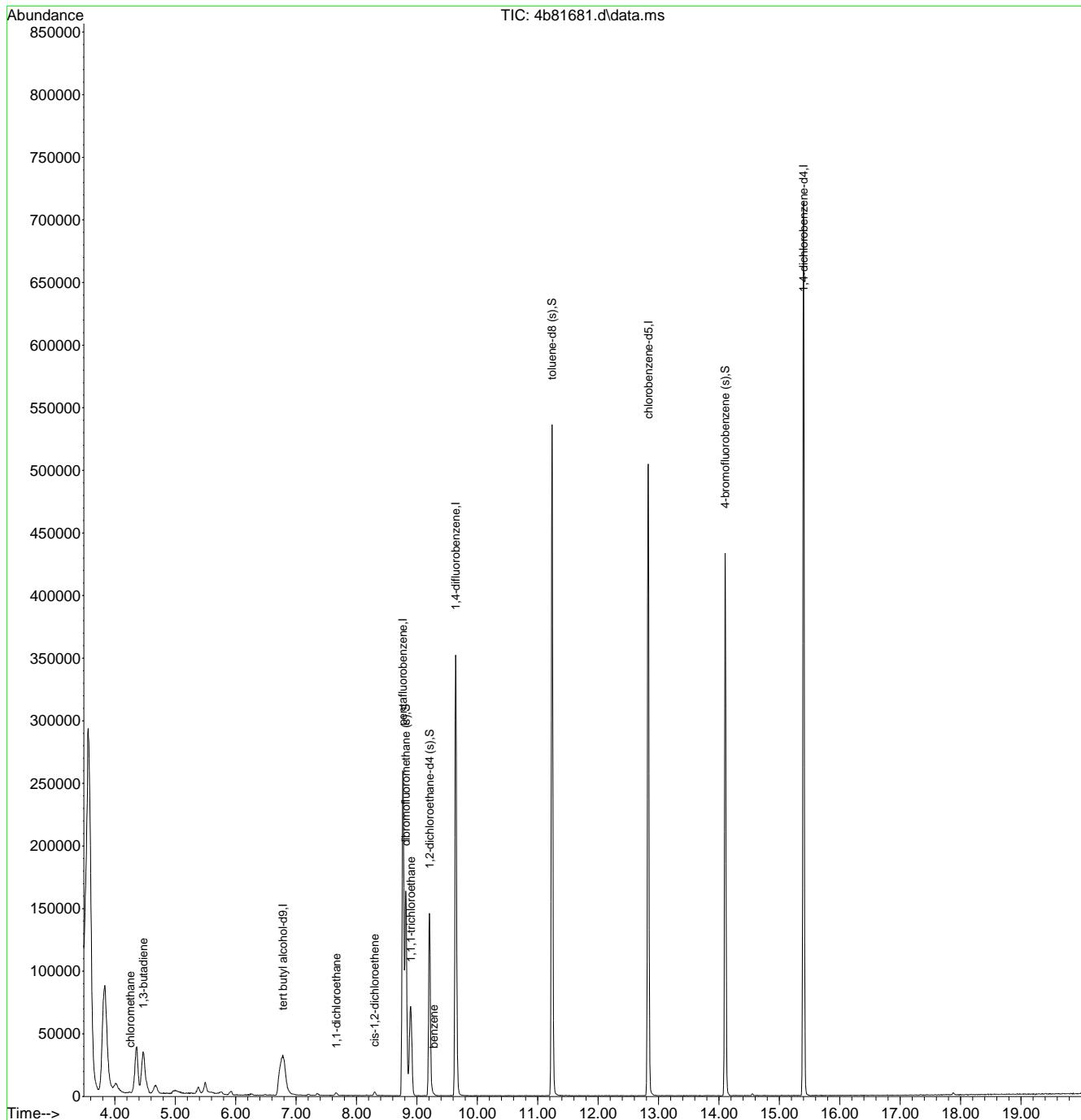
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	121727	500.00	ug/L	0.00
5) pentafluorobenzene	8.768	168	214305	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	293568	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	289693	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	188901	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	107087	55.73	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 111.46%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	105607	55.37	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 110.74%		
76) toluene-d8 (s)	11.236	98	346179	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.66%		
99) 4-bromofluorobenzene (s)	14.102	95	136114	49.63	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 99.26%		
<hr/>						
Target Compounds						
8) chloromethane	4.254	50	3055	0.46	ug/L	88
10) 1,3-butadiene	4.474	54	30030	8.38	ug/L	96
31) 1,1-dichloroethane	7.669	63	3507	0.75	ug/L	82
38) cis-1,2-dichloroethene	8.297	96	1859	0.67	ug/L #	76
47) 1,1,1-trichloroethane	8.898	97	66991	14.50	ug/L	98
58) benzene	9.275	78	1087	0.12	ug/L #	49
<hr/>						

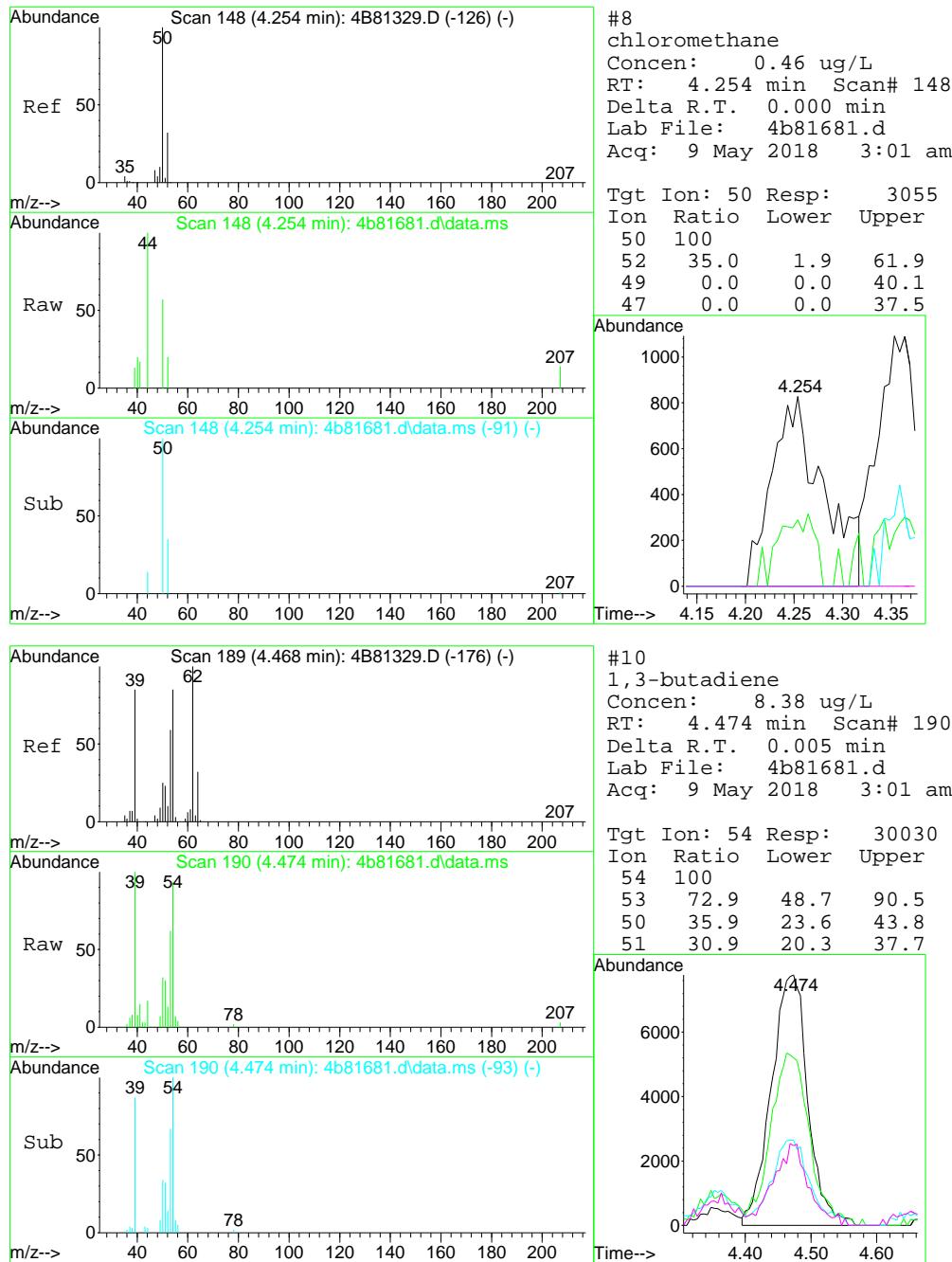
(#) = qualifier out of range (m) = manual integration (+) = signals summed

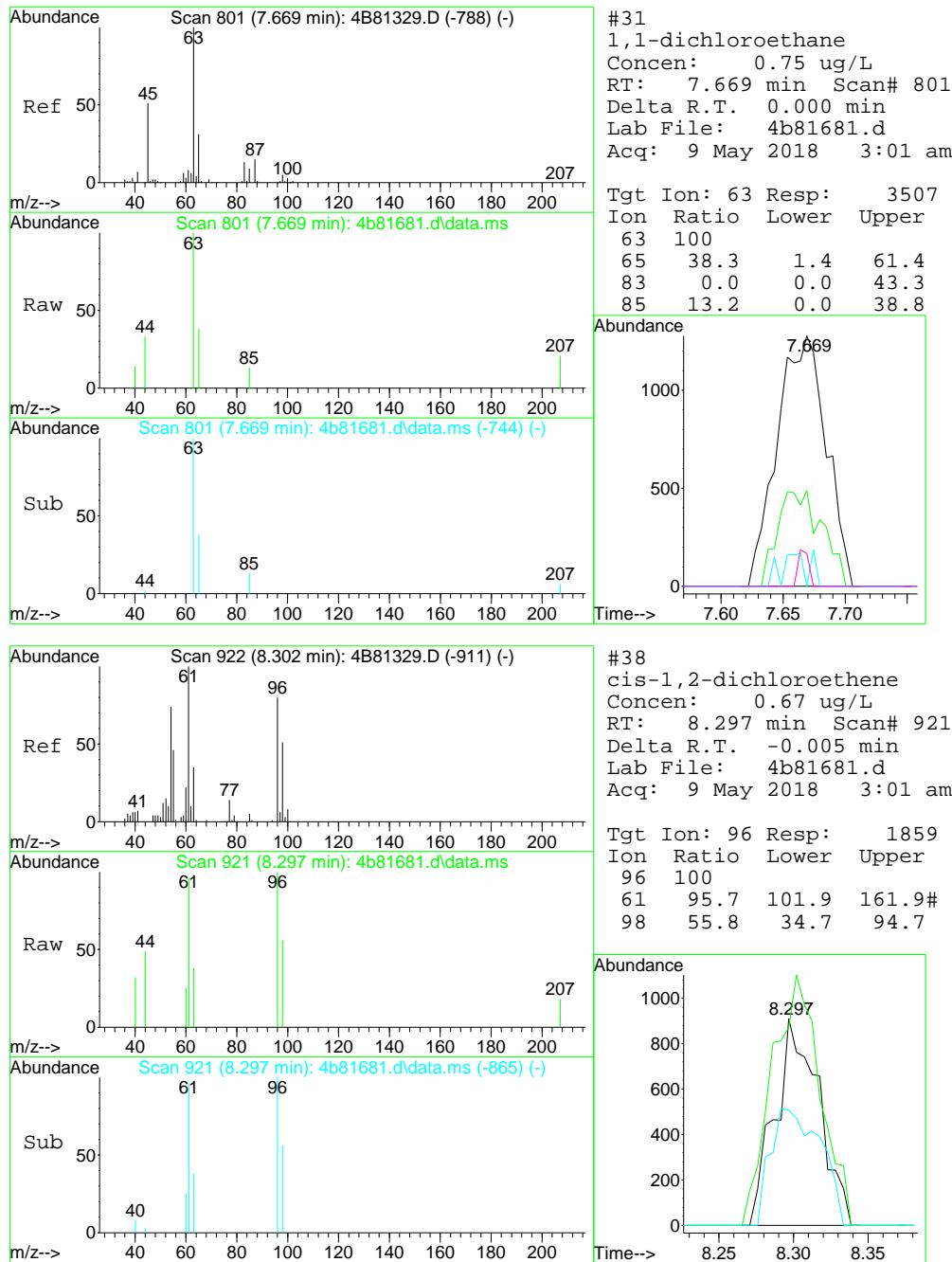
Quantitation Report (QT Reviewed)

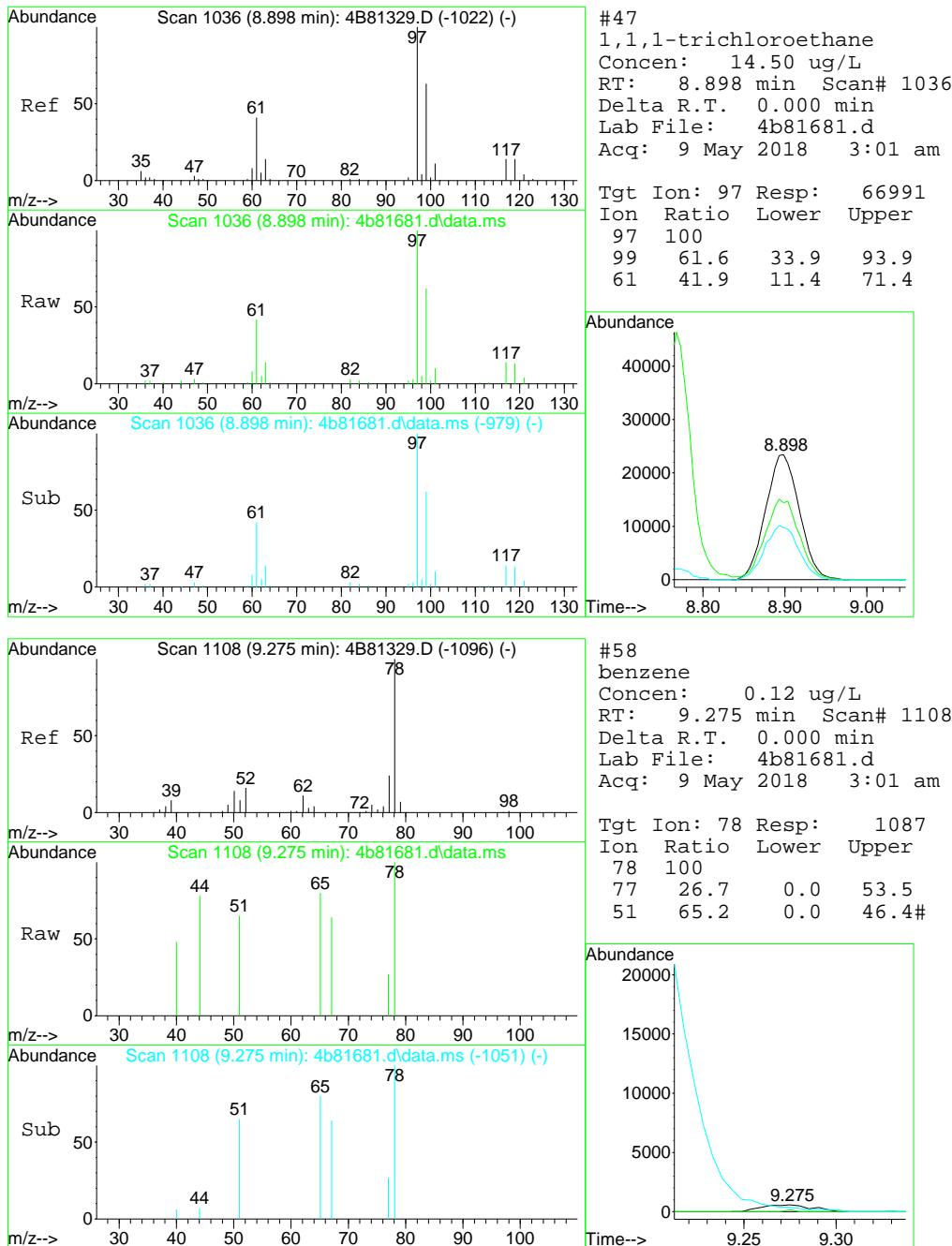
Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81681.d
 Acq On : 9 May 2018 3:01 am
 Operator : HueanhT
 Sample : JC65632-9
 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:49:23 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81682.d
 Acq On : 9 May 2018 3:29 am
 Operator : HueanhT
 Sample : JC65632-10 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:50:15 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

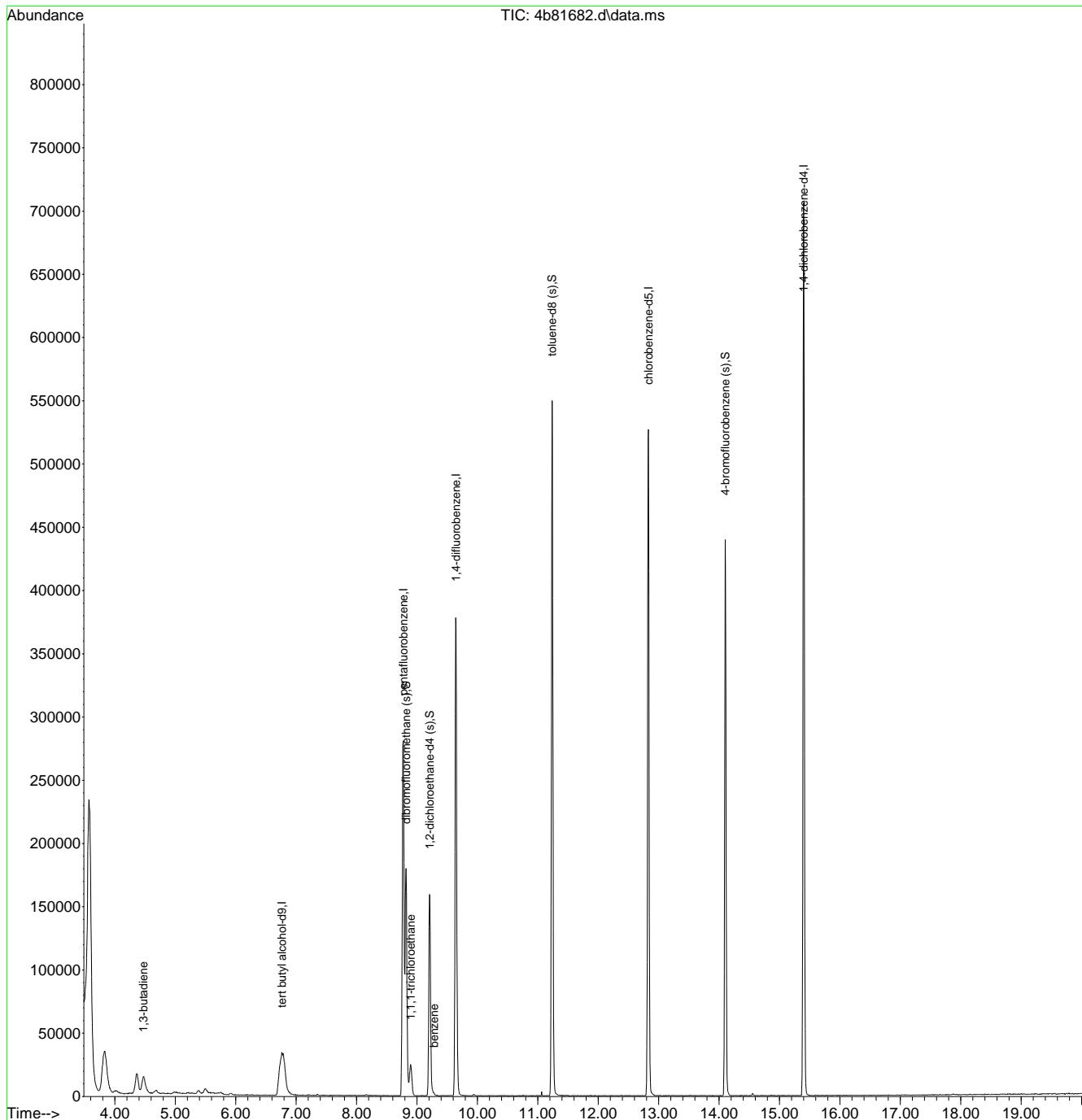
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.765	65	120580	500.00	ug/L	-0.01
5) pentafluorobenzene	8.773	168	223251	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	309775	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	295500	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	187077	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	114135	57.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 114.04%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	112347	55.82	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 111.64%		
76) toluene-d8 (s)	11.236	98	353901	49.44	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.88%		
99) 4-bromofluorobenzene (s)	14.103	95	136484	50.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.50%		
<hr/>						
Target Compounds						
10) 1,3-butadiene	4.474	54	11330	3.03	ug/L	94
47) 1,1,1-trichloroethane	8.893	97	22020	4.57	ug/L	96
58) benzene	9.280	78	1250	0.13	ug/L	86

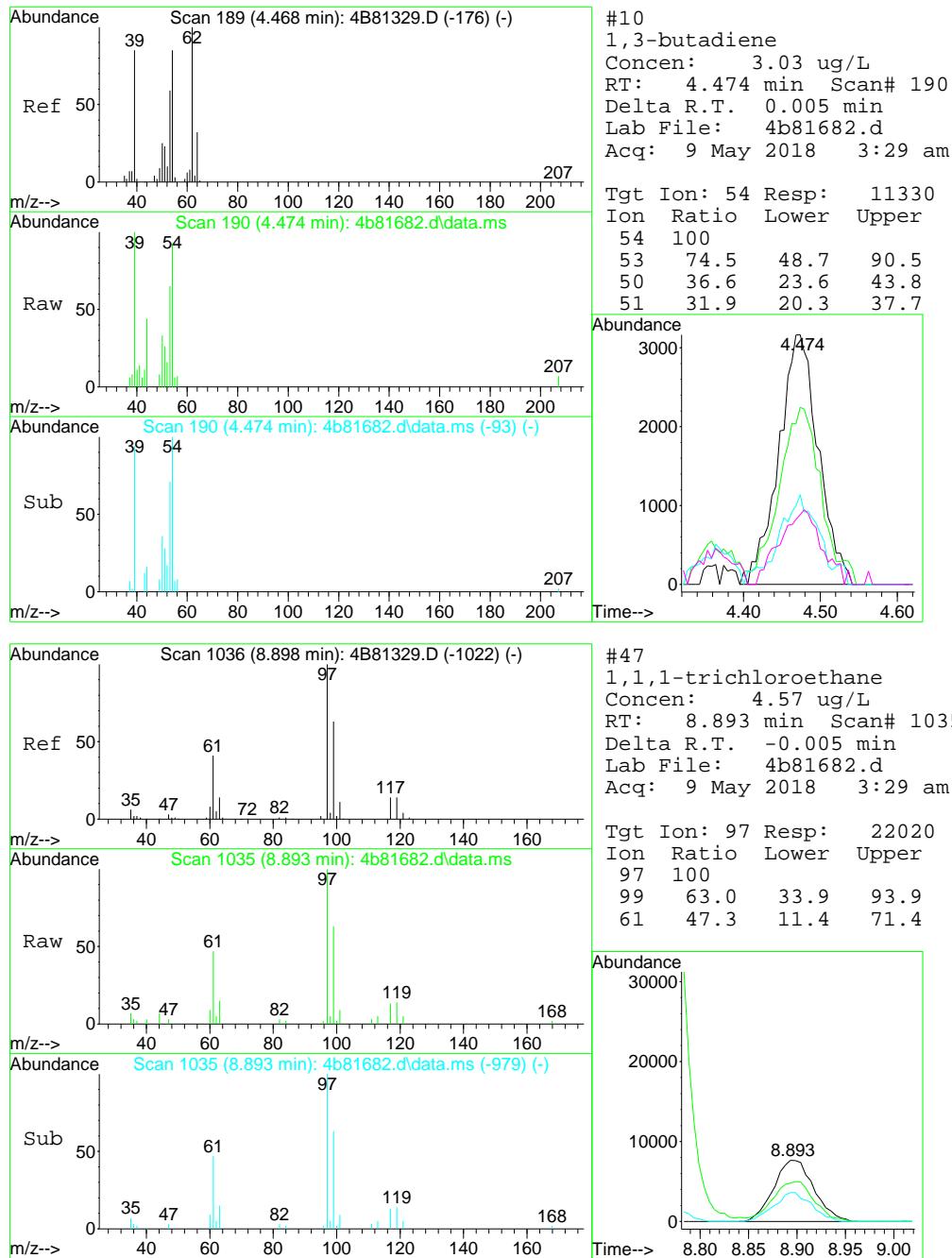
(#) = qualifier out of range (m) = manual integration (+) = signals summed

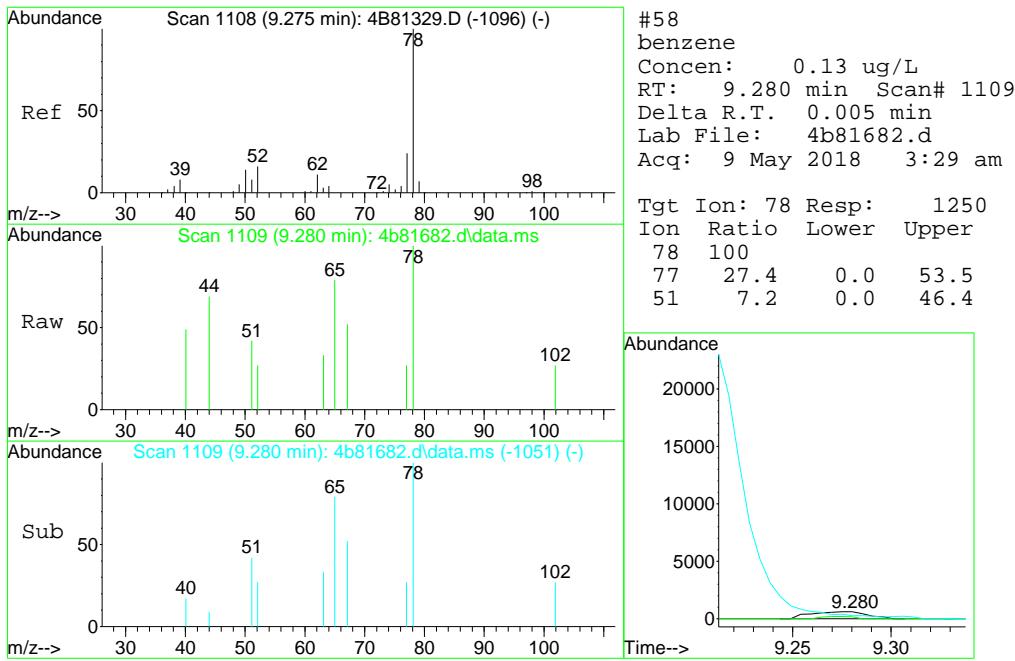
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81682.d
 Acq On : 9 May 2018 3:29 am
 Operator : HueanhT
 Sample : JC65632-10 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:50:15 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81683.d
 Acq On : 9 May 2018 3:57 am
 Operator : HueanhT
 Sample : JC65632-11 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:51:01 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

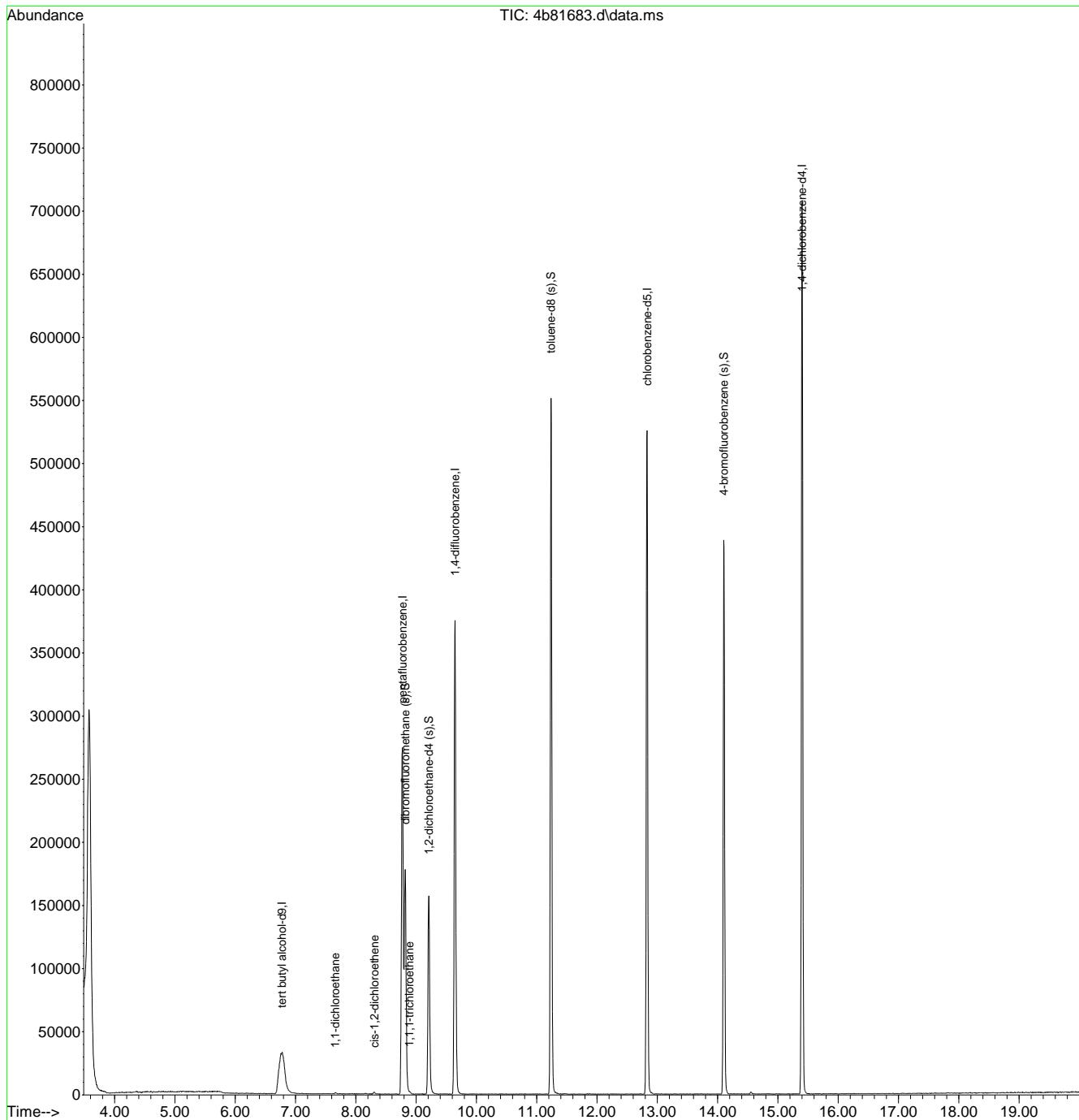
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.775	65	121362	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	221348	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	305027	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	299790	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	191908	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	112634	56.75	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	113.50%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	111645	56.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	112.68%	
76) toluene-d8 (s)	11.236	98	359441	49.49	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.98%	
99) 4-bromofluorobenzene (s)	14.103	95	137455	49.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.66%	
<hr/>						
Target Compounds						
31) 1,1-dichloroethane	7.659	63	1284	0.27	ug/L	85
38) cis-1,2-dichloroethene	8.307	96	780	0.27	ug/L #	65
47) 1,1,1-trichloroethane	8.888	97	1109	0.23	ug/L #	72

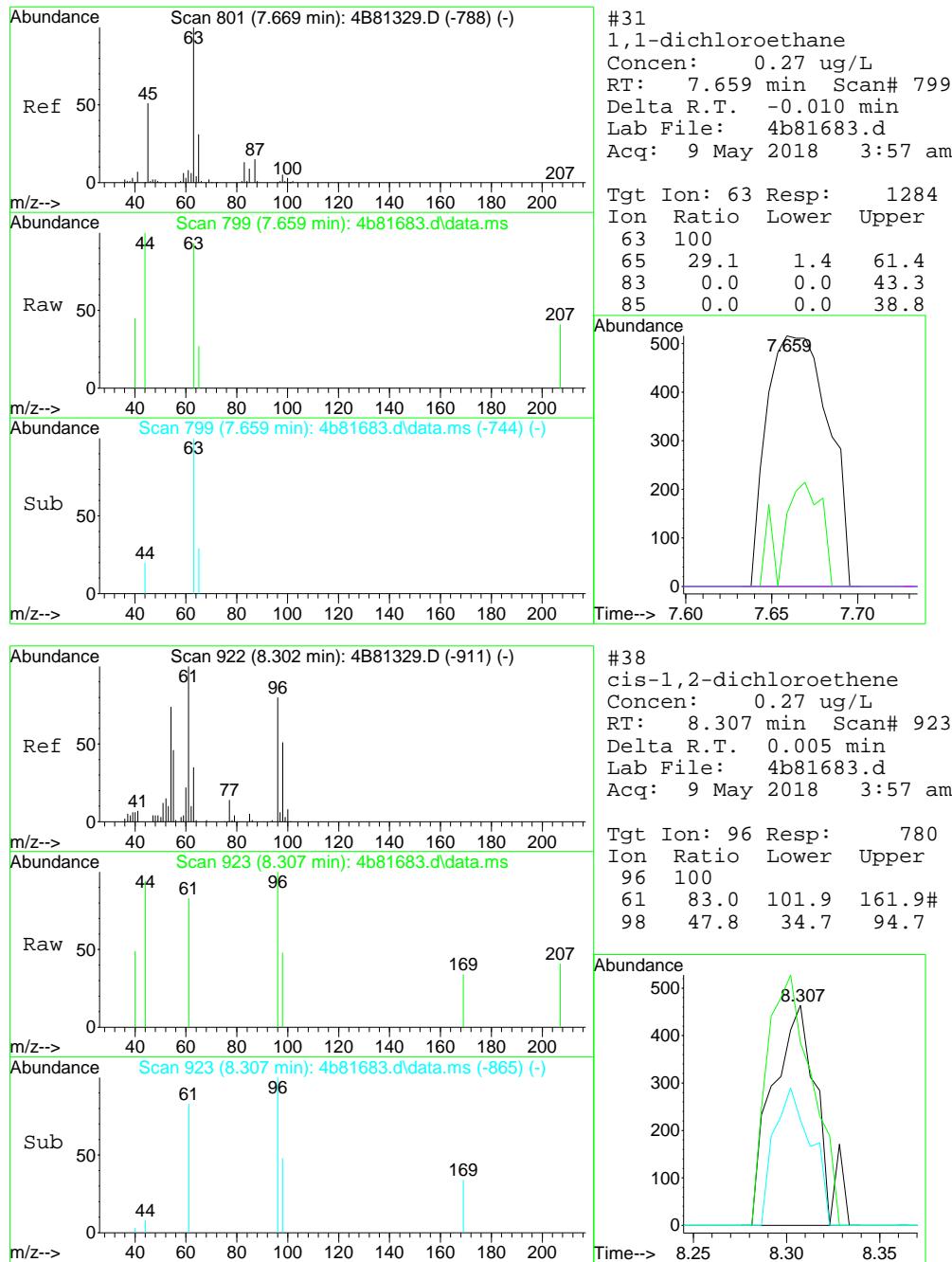
(#) = qualifier out of range (m) = manual integration (+) = signals summed

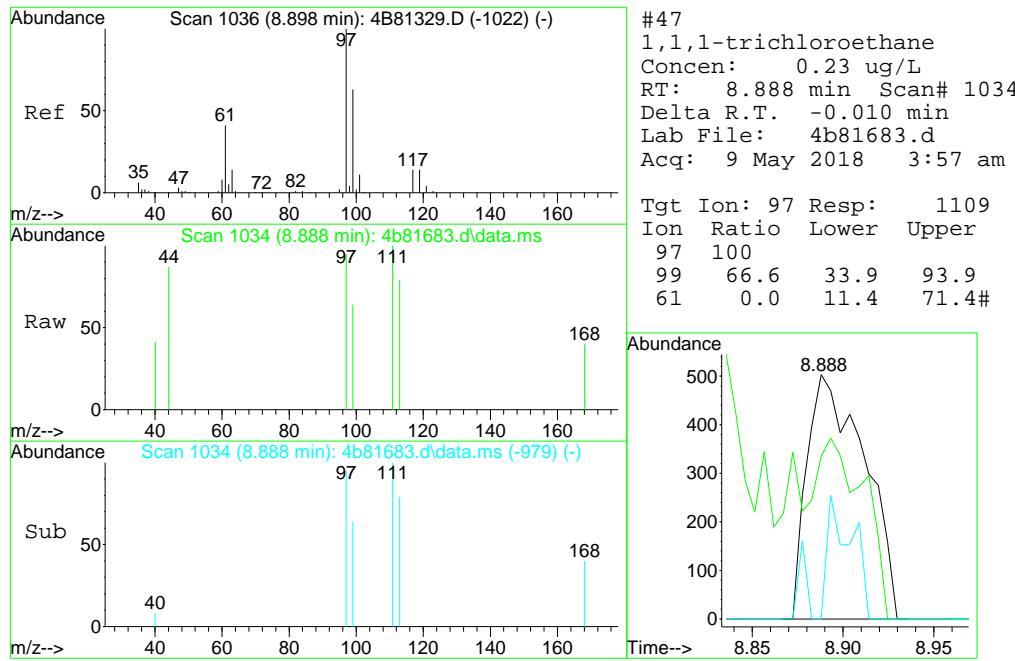
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81683.d
 Acq On : 9 May 2018 3:57 am
 Operator : HueanhT
 Sample : JC65632-11 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:51:01 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81684.d
 Acq On : 9 May 2018 4:25 am
 Operator : HueanhT
 Sample : JC65632-12 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:51:43 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

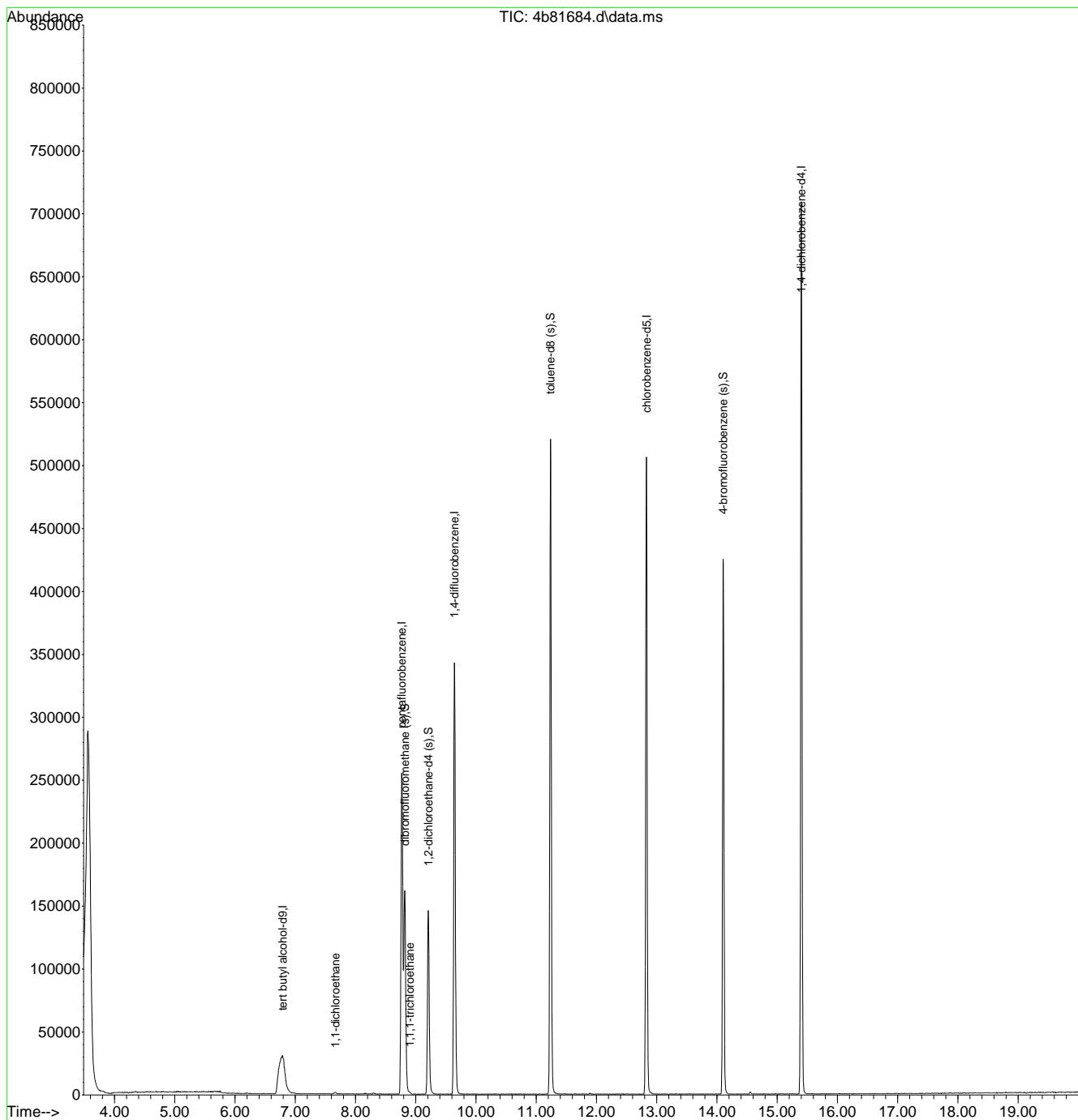
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.791	65	117743	500.00	ug/L	0.02
5) pentafluorobenzene	8.768	168	209395	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	285488	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	286076	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	188299	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	105570	56.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	112.46%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	103791	55.96	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	111.92%	
76) toluene-d8 (s)	11.236	98	342920	49.48	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.96%	
99) 4-bromofluorobenzene (s)	14.102	95	133826	48.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.90%	
<hr/>						
Target Compounds						
31) 1,1-dichloroethane	7.664	63	2102	0.46	ug/L	85
47) 1,1,1-trichloroethane	8.898	97	1158	0.26	ug/L	86
<hr/>						

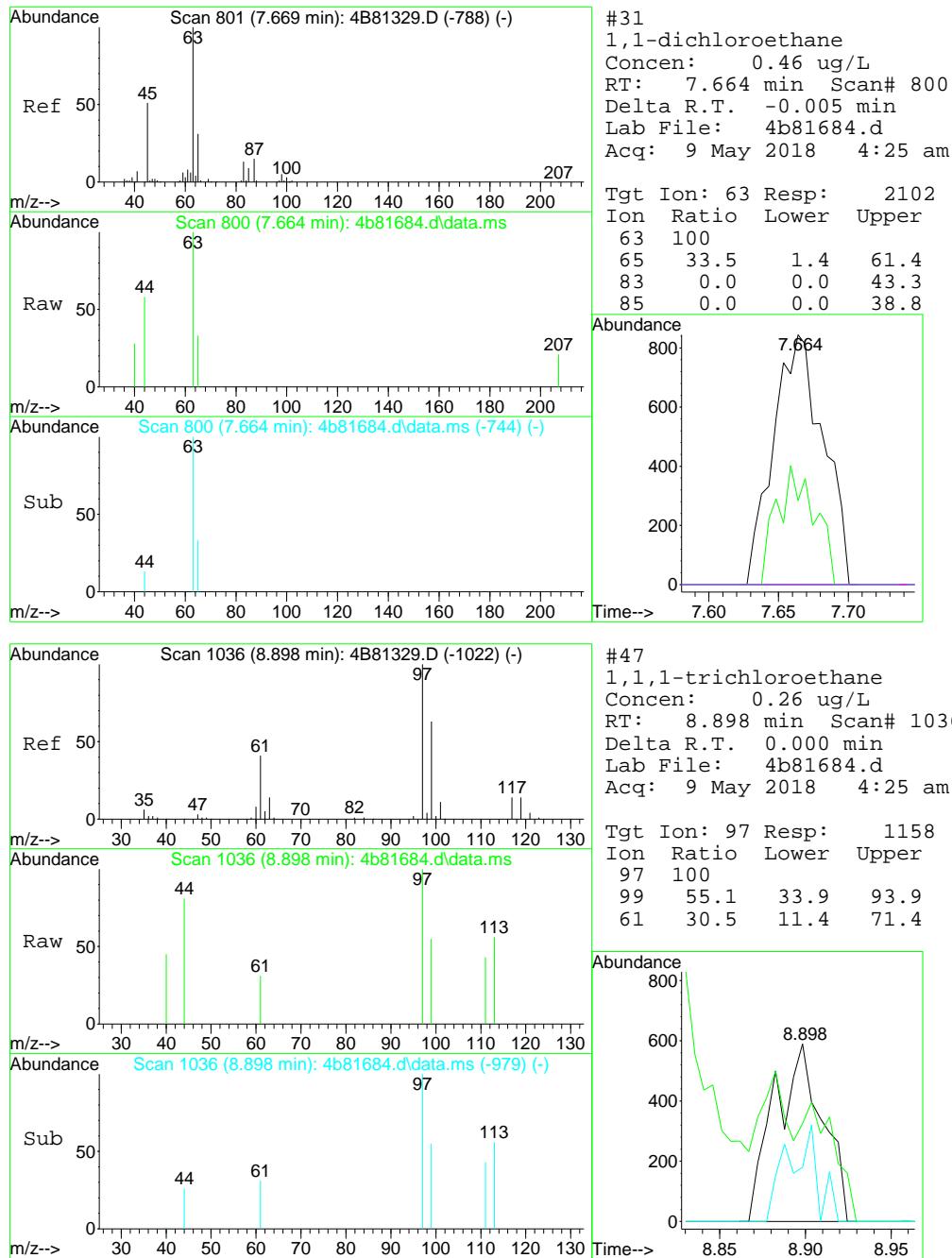
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81684.d
 Acq On : 9 May 2018 4:25 am
 Operator : HueanhT
 Sample : JC65632-12 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:51:43 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81669.d
 Acq On : 8 May 2018 9:25 pm
 Operator : HueanhT
 Sample : JC65632-13 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:10 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

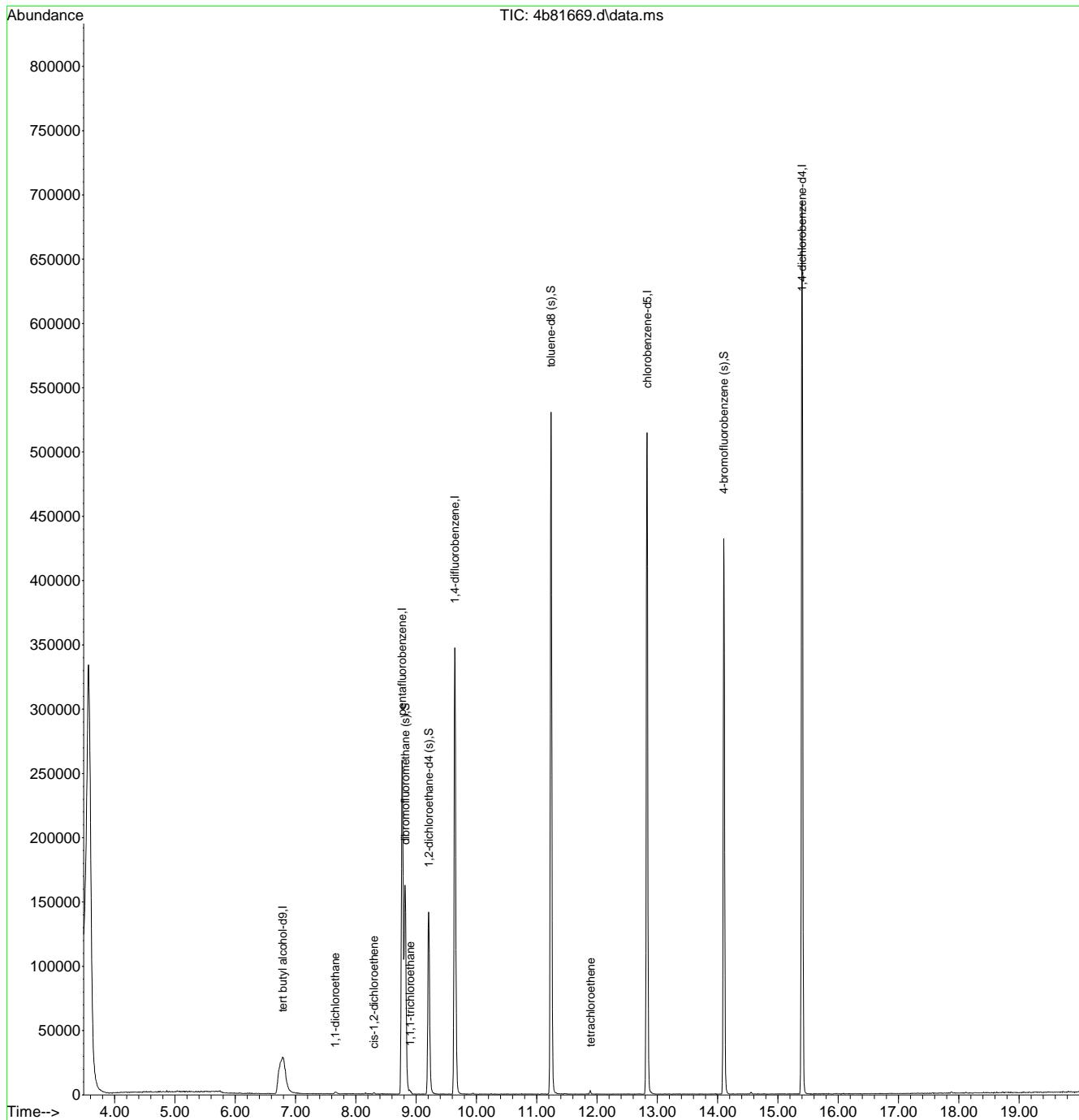
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	122148	500.00	ug/L	0.01
5) pentafluorobenzene	8.767	168	220296	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	293943	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	295345	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	187367	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	107978	54.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	109.34%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	104285	54.61	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	109.22%	
76) toluene-d8 (s)	11.236	98	350473	48.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.96%	
99) 4-bromofluorobenzene (s)	14.102	95	135466	49.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.60%	
<hr/>						
Target Compounds						
31) 1,1-dichloroethane	7.659	63	2673	0.55	ug/L	85
38) cis-1,2-dichloroethene	8.297	96	623	0.22	ug/L	97
47) 1,1,1-trichloroethane	8.903	97	2231	0.47	ug/L	79
81) tetrachloroethene	11.895	164	614	0.28	ug/L	88

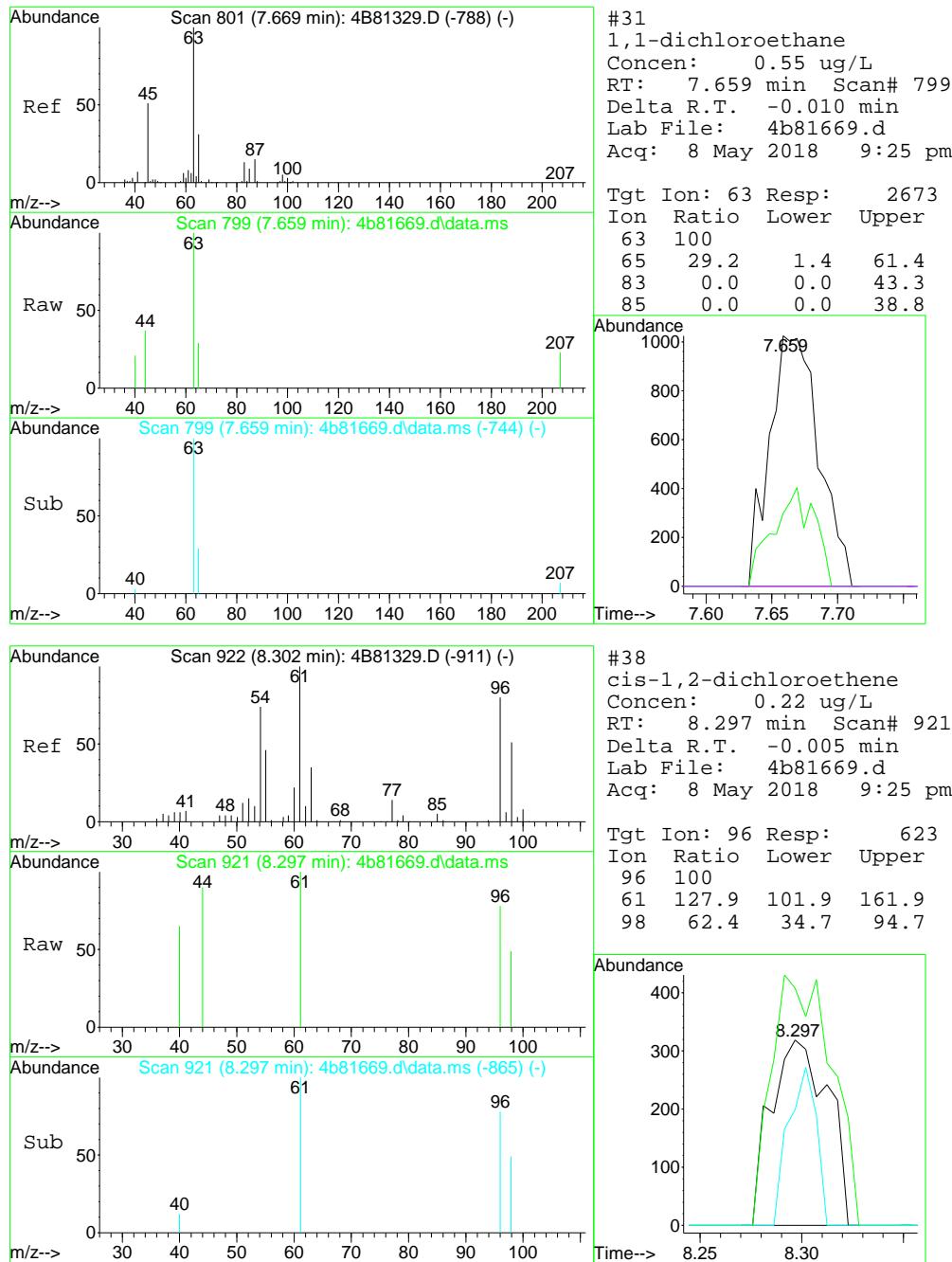
(#) = qualifier out of range (m) = manual integration (+) = signals summed

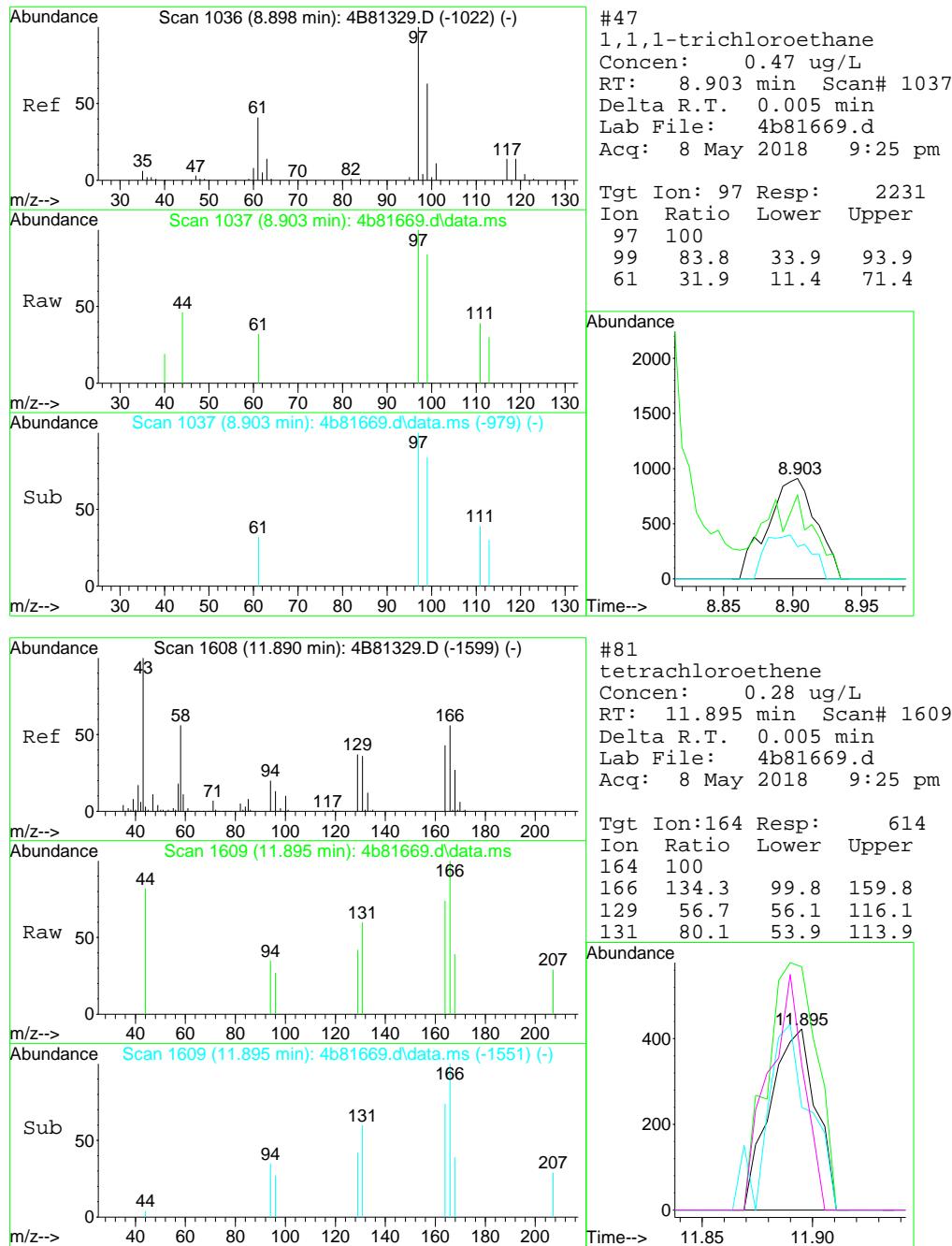
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81669.d
 Acq On : 8 May 2018 9:25 pm
 Operator : HueanhT
 Sample : JC65632-13
 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:10 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81685.d
 Acq On : 9 May 2018 4:53 am
 Operator : HueanhT
 Sample : JC65632-14 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:52:21 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

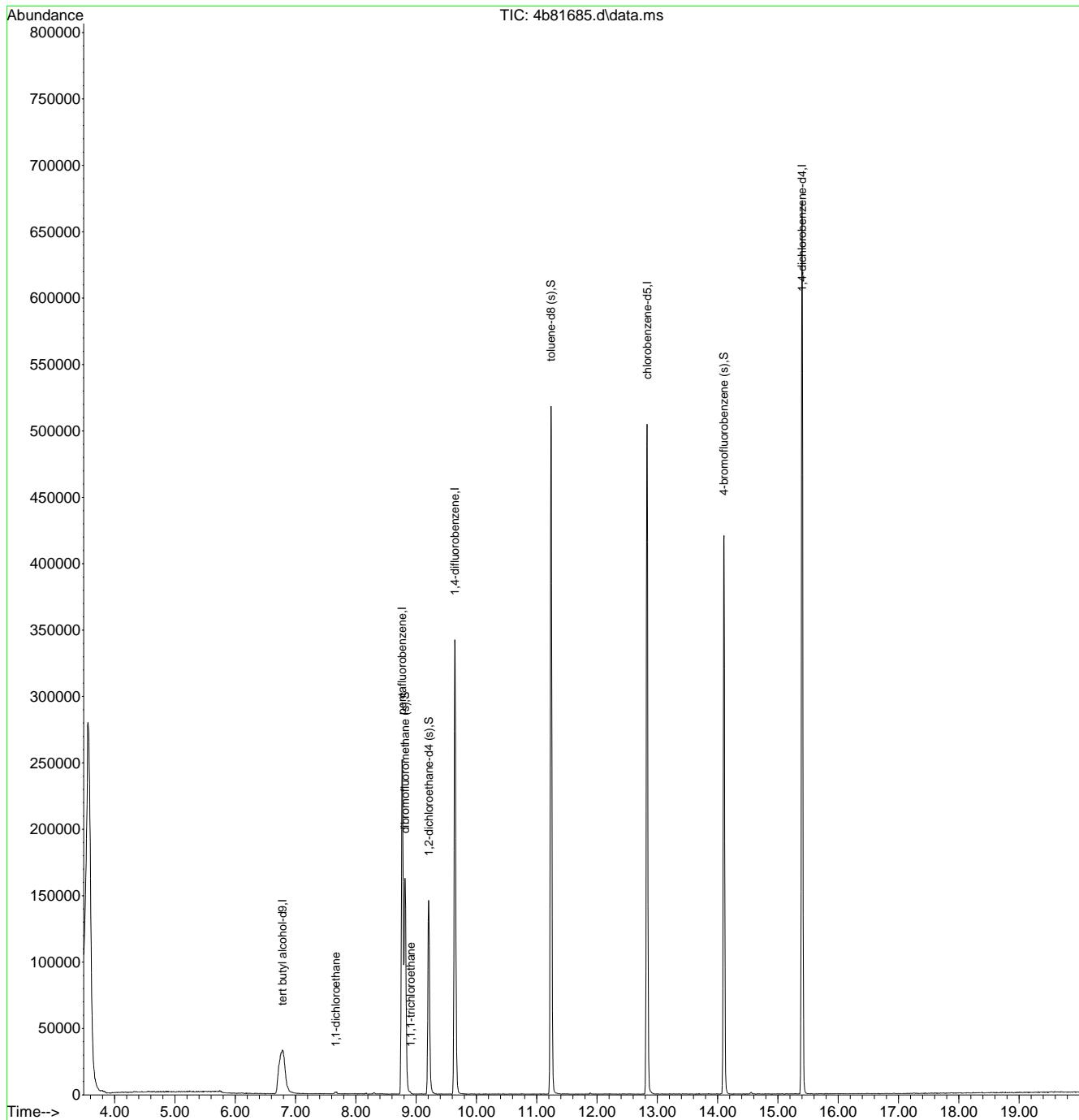
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	126775	500.00	ug/L	0.00
5) pentafluorobenzene	8.768	168	206050	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	282054	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	283250	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	181183	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	105539	57.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	114.26%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	104954	57.27	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	114.54%	
76) toluene-d8 (s)	11.236	98	336971	49.11	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.22%	
99) 4-bromofluorobenzene (s)	14.102	95	131270	49.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.80%	
<hr/>						
Target Compounds						
31) 1,1-dichloroethane	7.664	63	2098	0.47	ug/L	85
47) 1,1,1-trichloroethane	8.909	97	1036	0.23	ug/L	96
<hr/>						

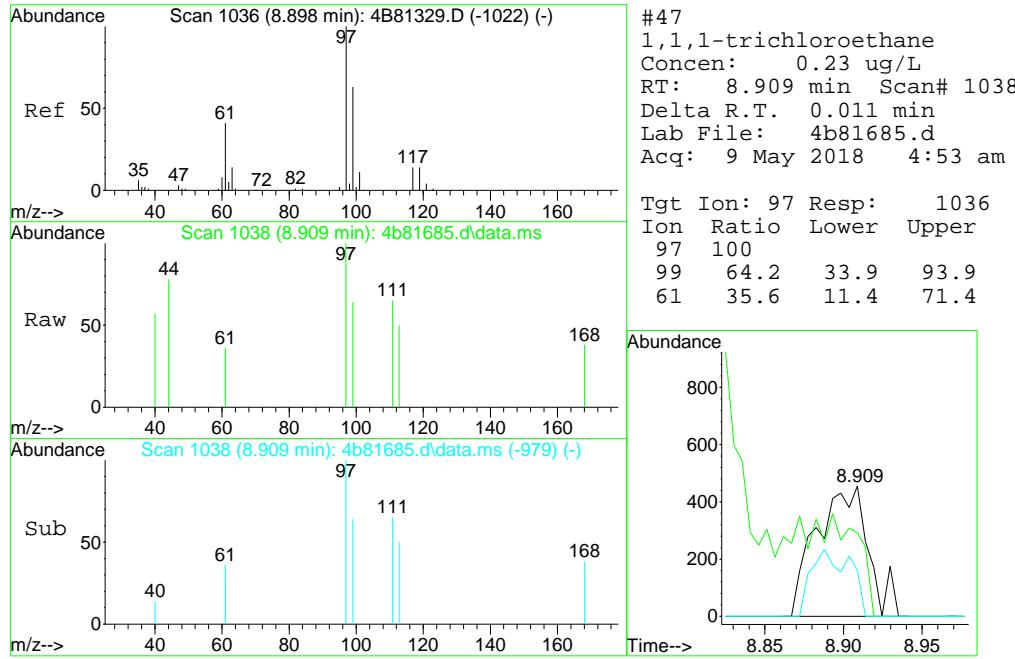
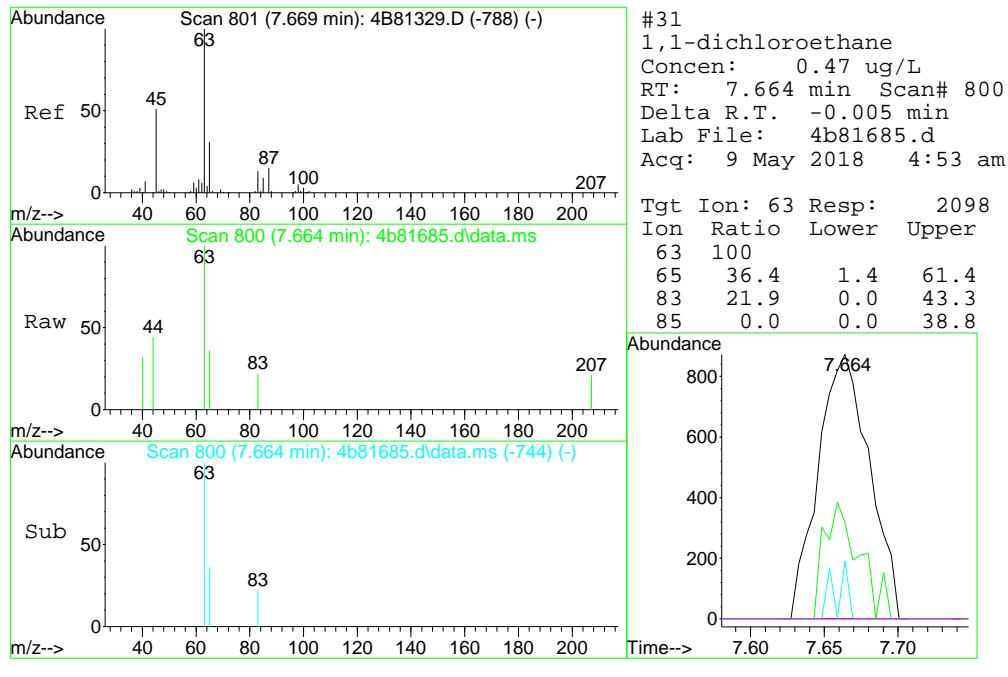
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81685.d
 Acq On : 9 May 2018 4:53 am
 Operator : HueanhT
 Sample : JC65632-14 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:52:21 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81686.d
 Acq On : 9 May 2018 5:21 am
 Operator : HueanhT
 Sample : JC65632-15 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:53:05 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

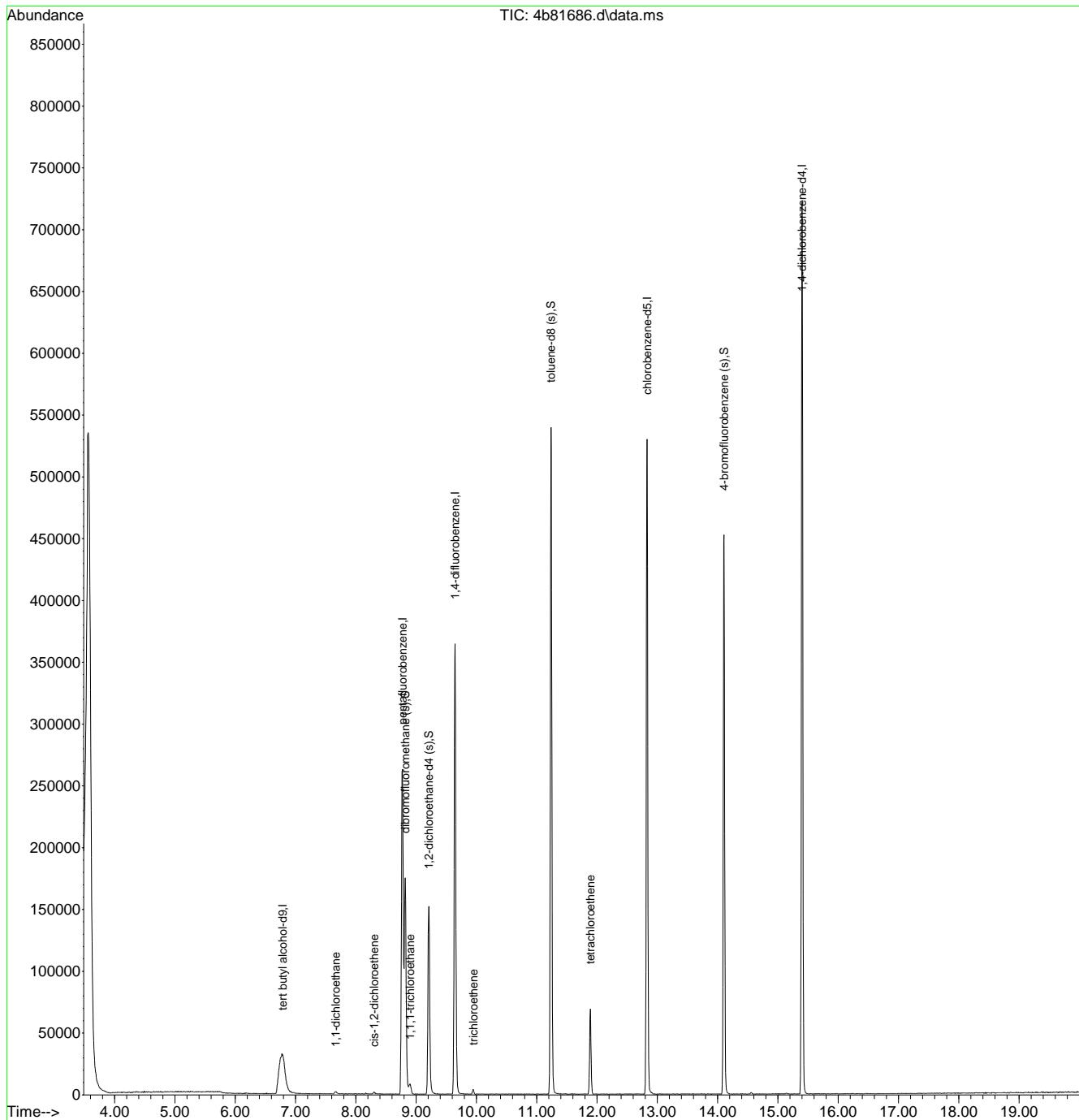
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	124421	500.00	ug/L	0.01
5) pentafluorobenzene	8.773	168	216668	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	299876	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	296913	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	193198	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	111321	57.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 114.60%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	109112	56.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 112.00%		
76) toluene-d8 (s)	11.236	98	351026	48.80	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 97.60%		
99) 4-bromofluorobenzene (s)	14.108	95	141388	50.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.82%		
<hr/>						
Target Compounds						
				Qvalue		
31) 1,1-dichloroethane	7.664	63	3113	0.66	ug/L	96
38) cis-1,2-dichloroethene	8.302	96	993	0.35	ug/L	97
47) 1,1,1-trichloroethane	8.903	97	7047	1.51	ug/L	91
63) trichloroethene	9.949	95	1414	0.61	ug/L	83
81) tetrachloroethene	11.890	164	16325	7.45	ug/L	98

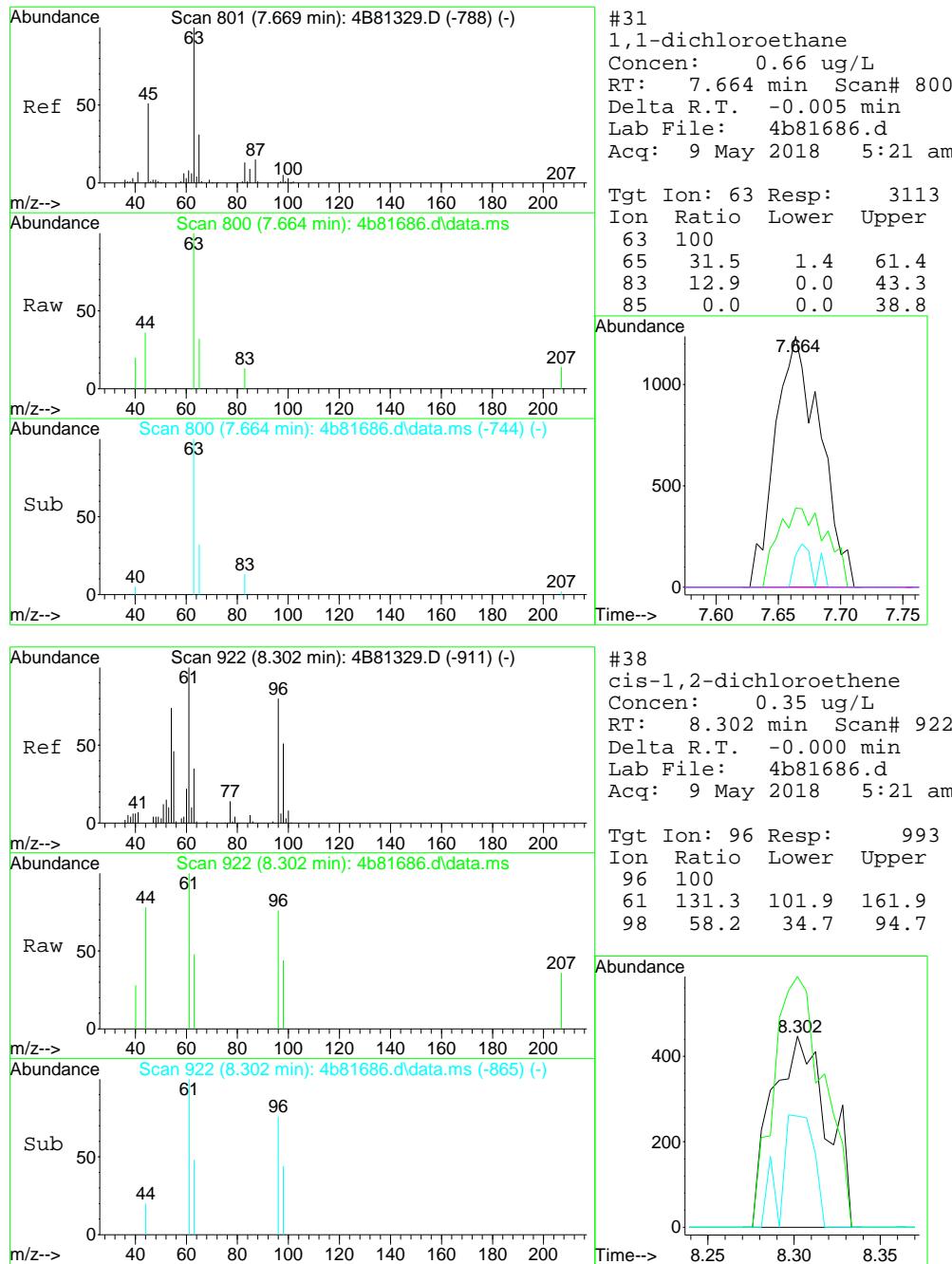
(#) = qualifier out of range (m) = manual integration (+) = signals summed

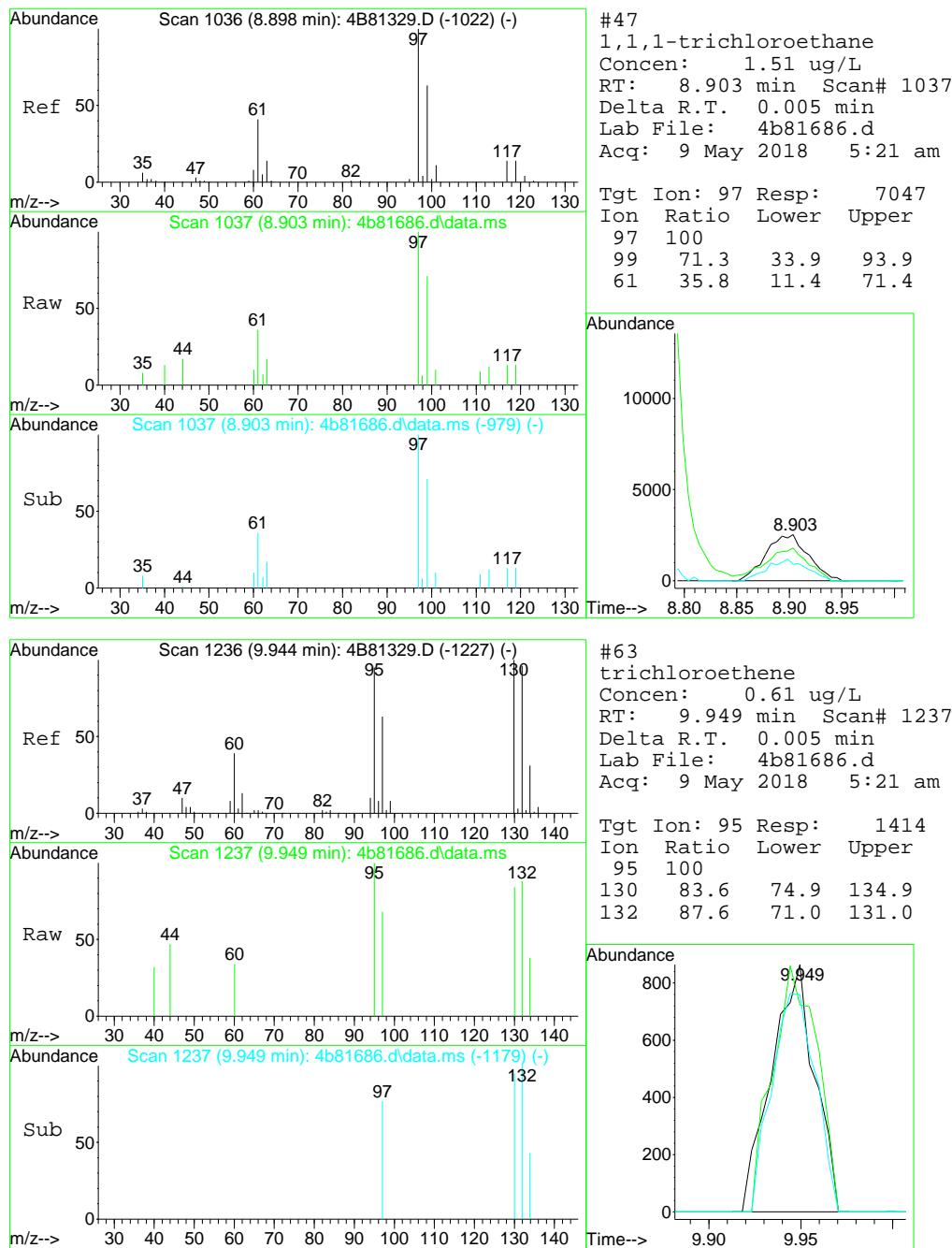
Quantitation Report (QT Reviewed)

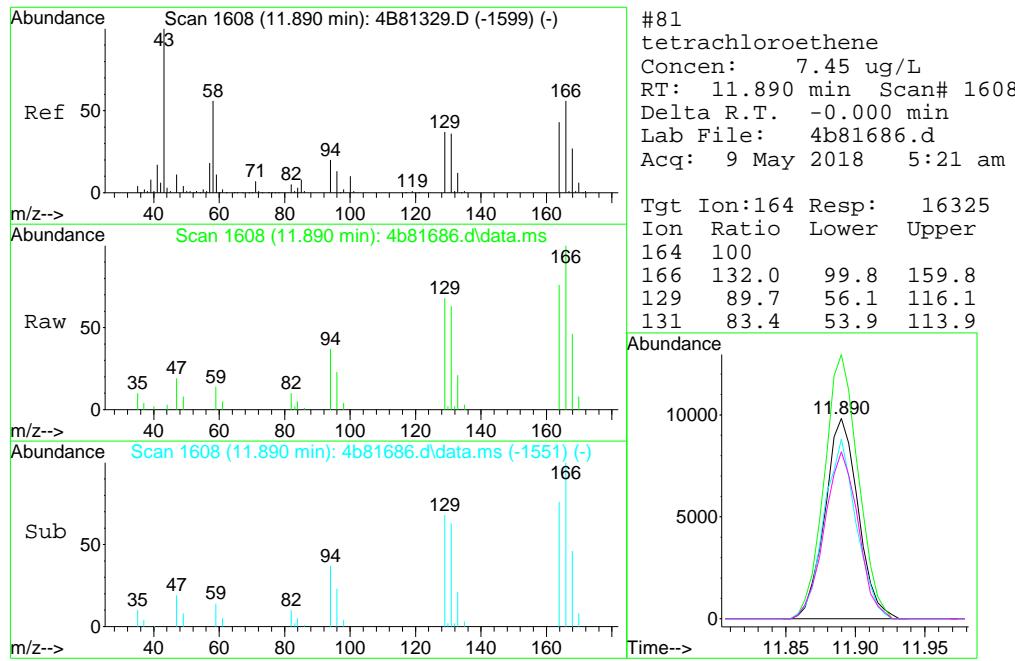
Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81686.d
 Acq On : 9 May 2018 5:21 am
 Operator : HueanhT
 Sample : JC65632-15 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:53:05 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81687.d
 Acq On : 9 May 2018 5:49 am
 Operator : HueanhT
 Sample : JC65632-16 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:53:37 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.780	65	132555	500.00	ug/L	0.00
5) pentafluorobenzene	8.773	168	220195	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.646	114	307700	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	303141	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	189906	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	114045	57.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	115.54%	
55) 1,2-dichloroethane-d4 (s)	9.212	65	114493	57.27	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	114.54%	
76) toluene-d8 (s)	11.236	98	359754	48.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	97.98%	
99) 4-bromofluorobenzene (s)	14.103	95	140801	51.07	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.14%	

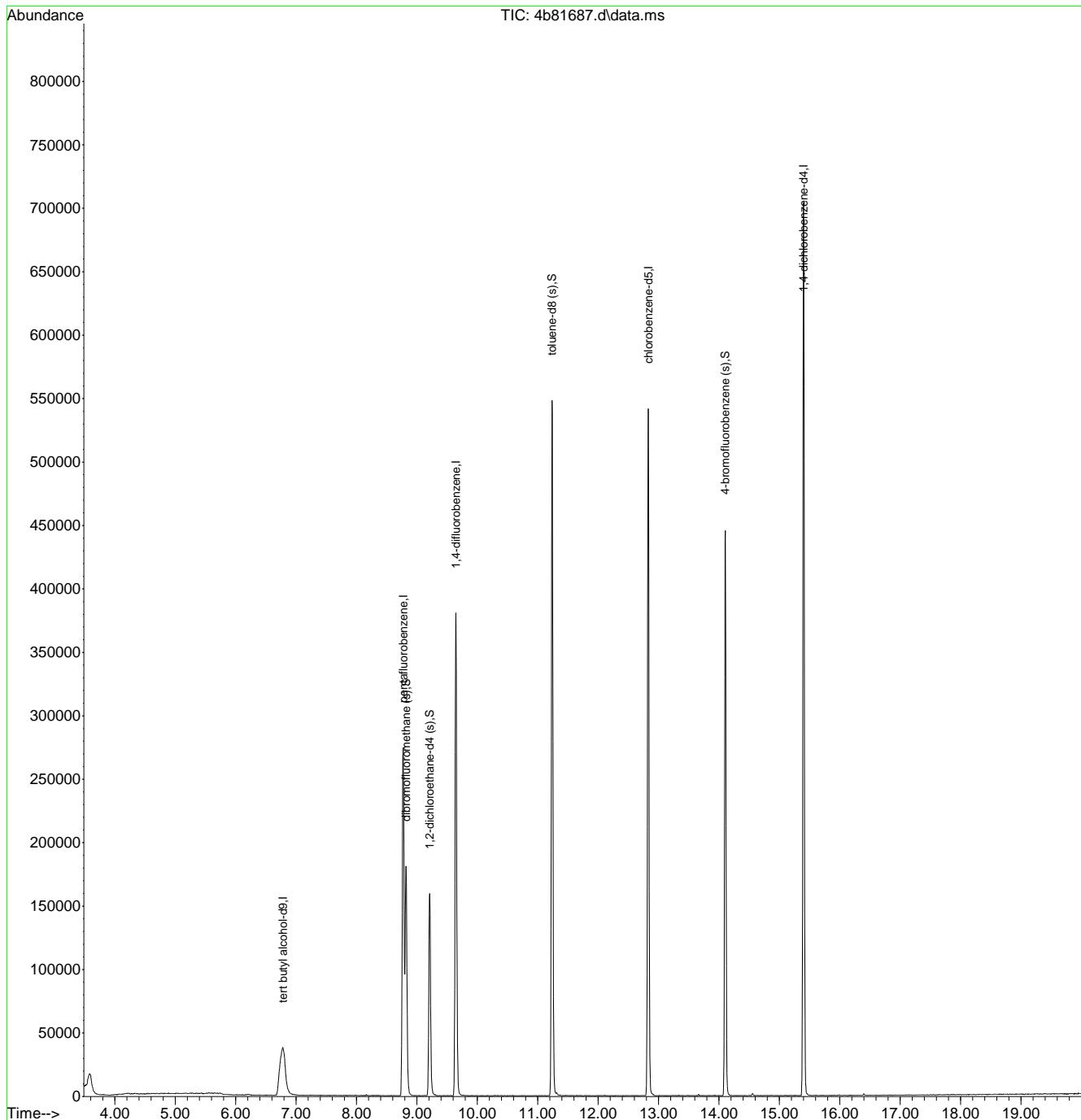
Target Compounds	Qvalue
------------------	--------

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81687.d
 Acq On : 9 May 2018 5:49 am
 Operator : HueanhT
 Sample : JC65632-16 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 24 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:53:37 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : R:\complete\2018\dayton201805\05-11-18\janellec\v2v2014\
 Data File : 2v50470.d
 Acq On : 9 May 2018 5:16 pm
 Operator : JessicaP
 Sample : JC65632-17
 Misc : MS26140,V2V2014,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 21 09:23:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

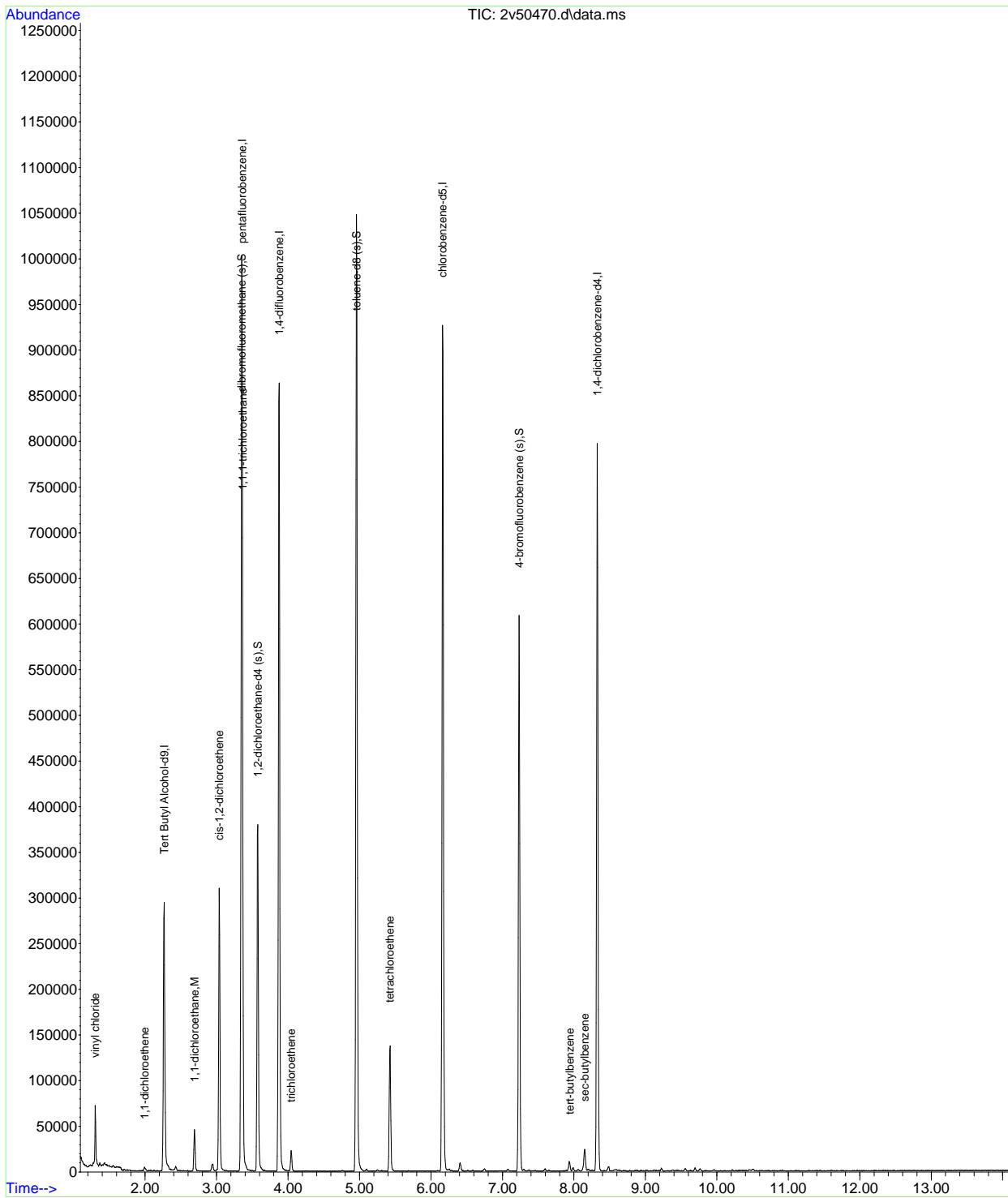
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	240525	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	328934	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	478773	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	393417	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	153308	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	174043	52.56	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 105.12%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	187252	56.27	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 112.54%		
77) toluene-d8 (s)	4.956	98	527003	51.85	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 103.70%		
100) 4-bromofluorobenzene (s)	7.232	95	163178	52.33	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 104.66%		
Target Compounds						
11) vinyl chloride	1.302	62	33697	5.92	ug/L	98
21) 1,1-dichloroethene	1.994	61	1785	0.28	ug/L	82
33) 1,1-dichloroethane	2.691	63	30194	3.75	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	79923	18.04	ug/L	90
48) 1,1,1-trichloroethane	3.362	97	10499	1.60	ug/L #	1
63) trichloroethene	4.044	95	5454	1.27	ug/L	93
83) tetrachloroethene	5.423	164	23608	8.17	ug/L	93
110) tert-butylbenzene	7.939	119	3849	0.50	ug/L	92
112) sec-butylbenzene	8.149	105	14636	1.24	ug/L	93

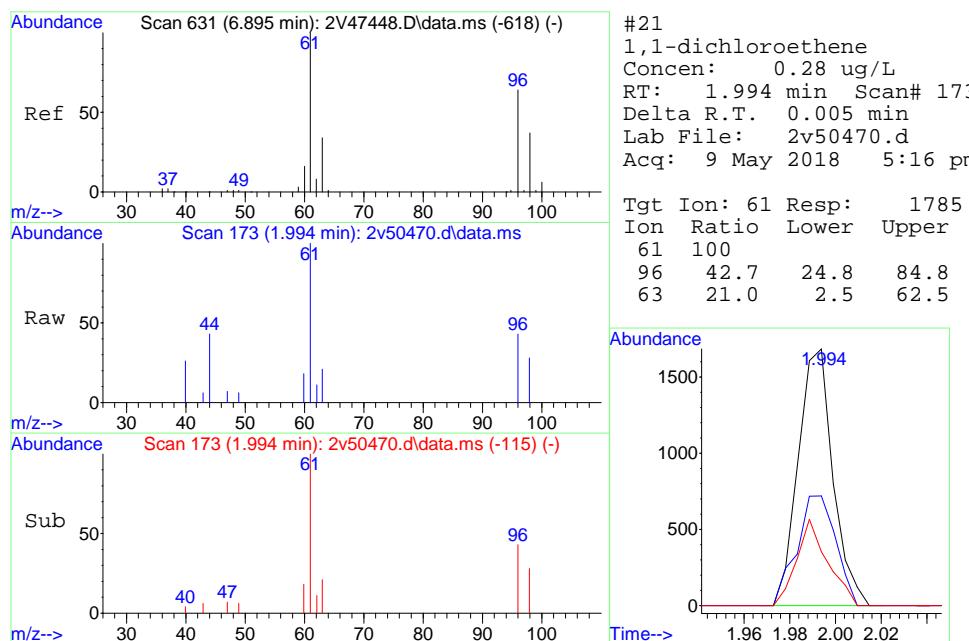
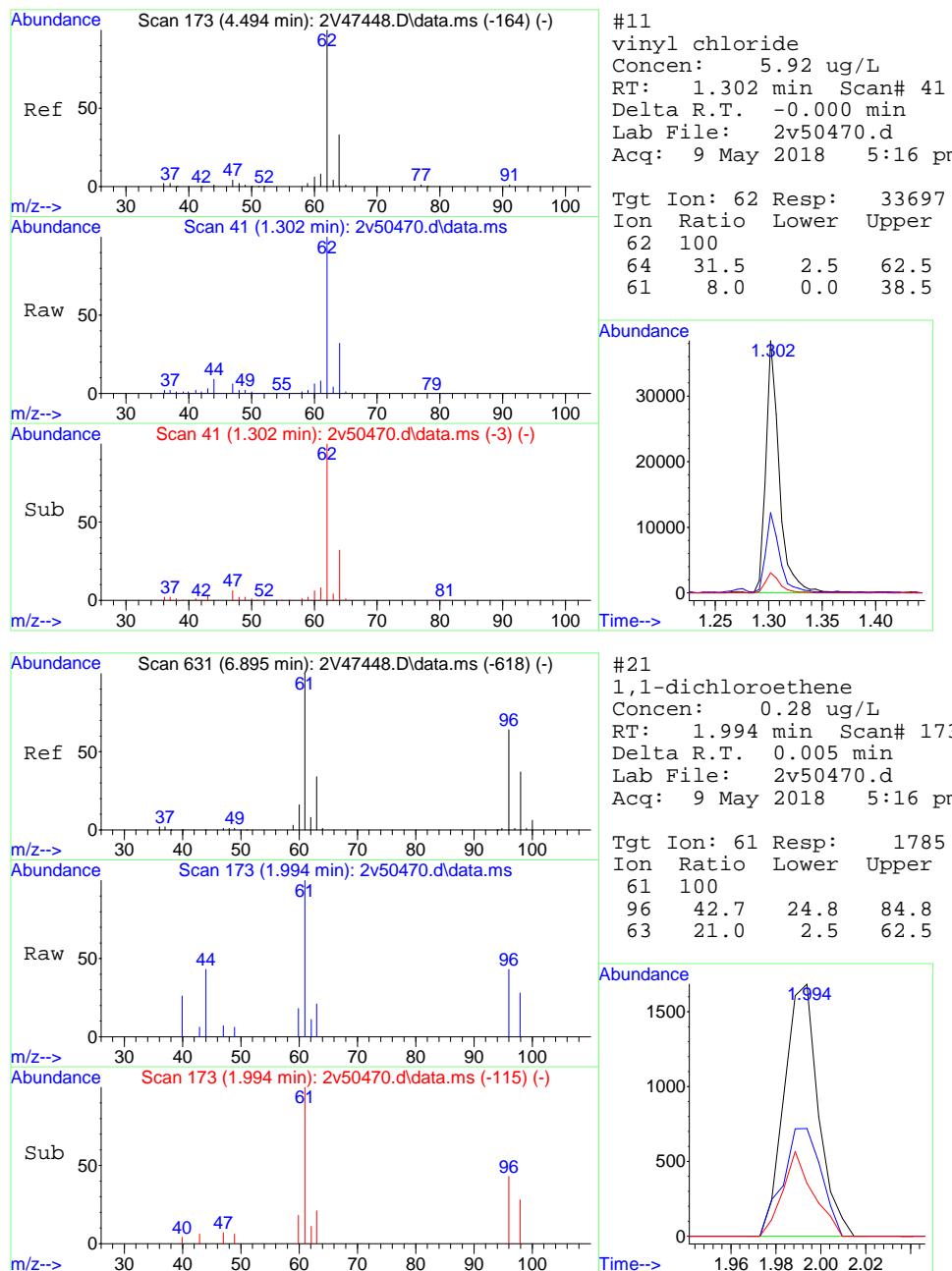
(#) = qualifier out of range (m) = manual integration (+) = signals summed

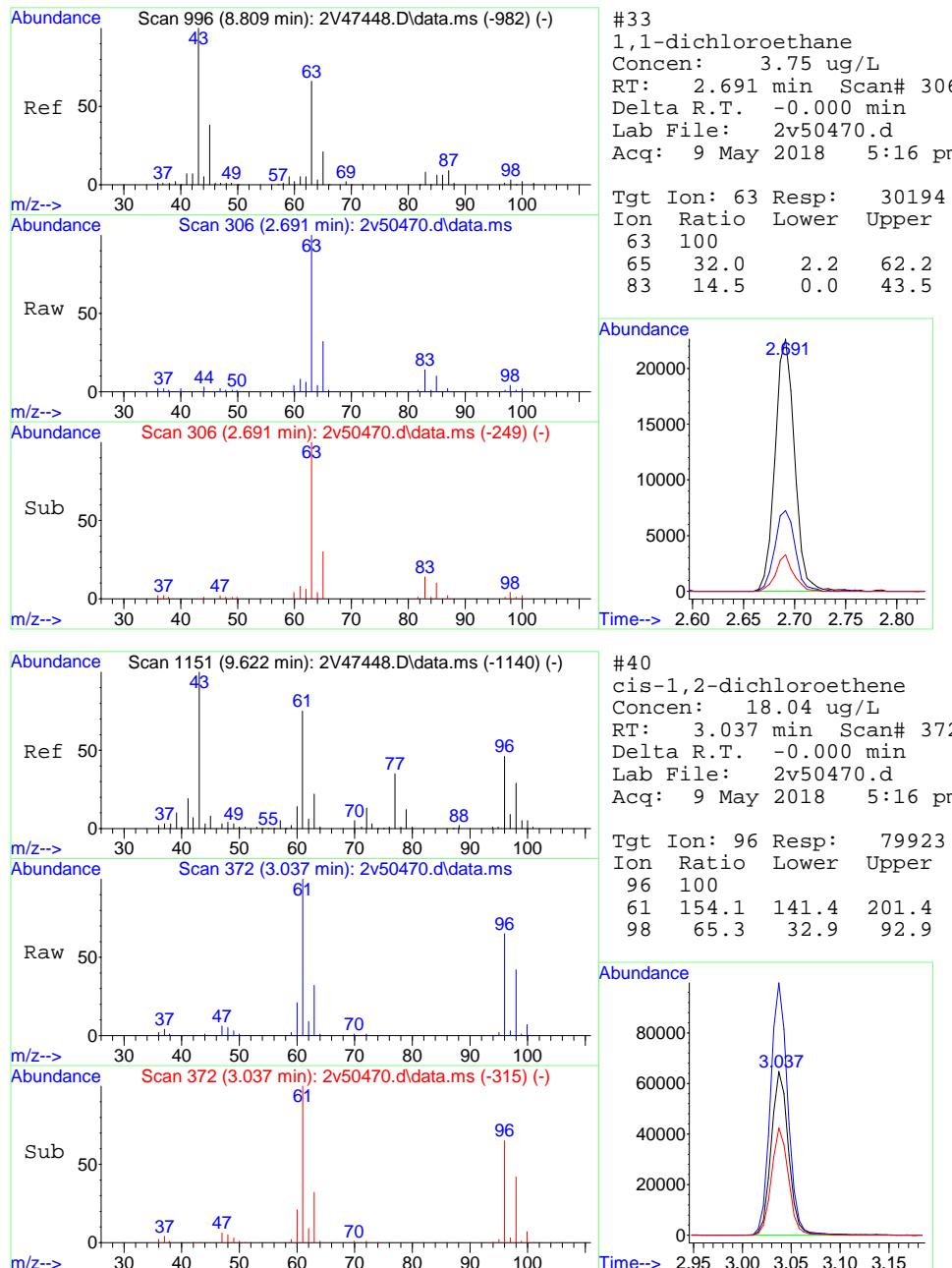
Quantitation Report (QT Reviewed)

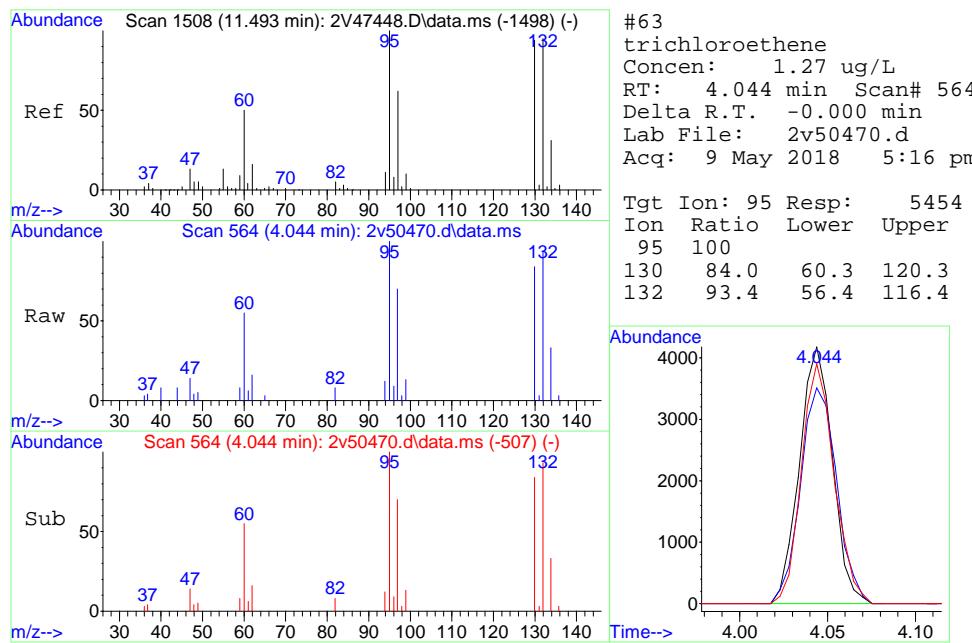
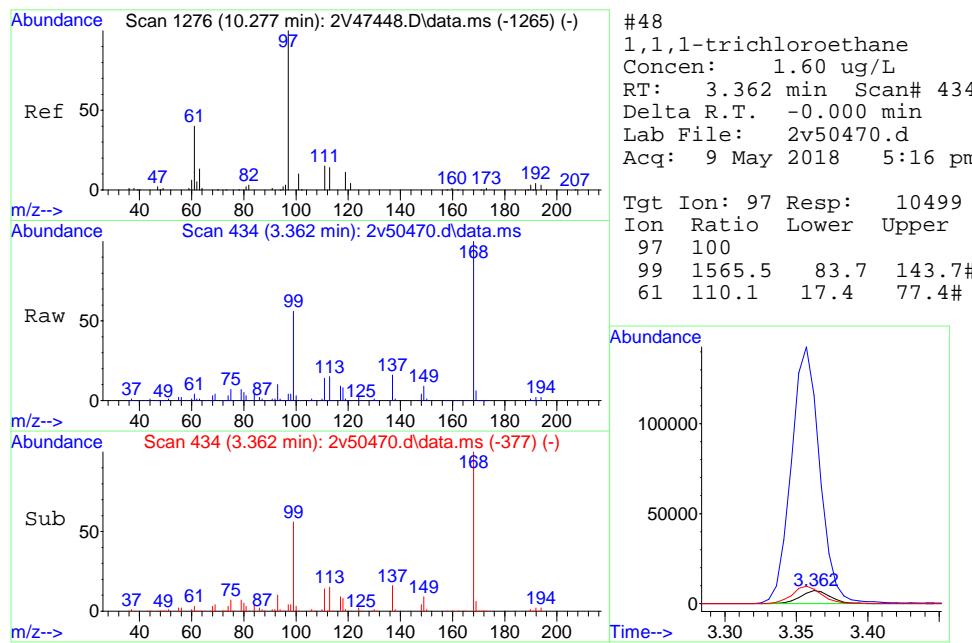
Data Path : R:\complete\2018\dayton201805\05-11-18\janellec\v2v2014\
 Data File : 2v50470.d
 Acq On : 9 May 2018 5:16 pm
 Operator : JessicaP
 Sample : JC65632-17
 Misc : MS26140,V2V2014,5,,,,1
 ALS Vial : 19 Sample Multiplier: 1

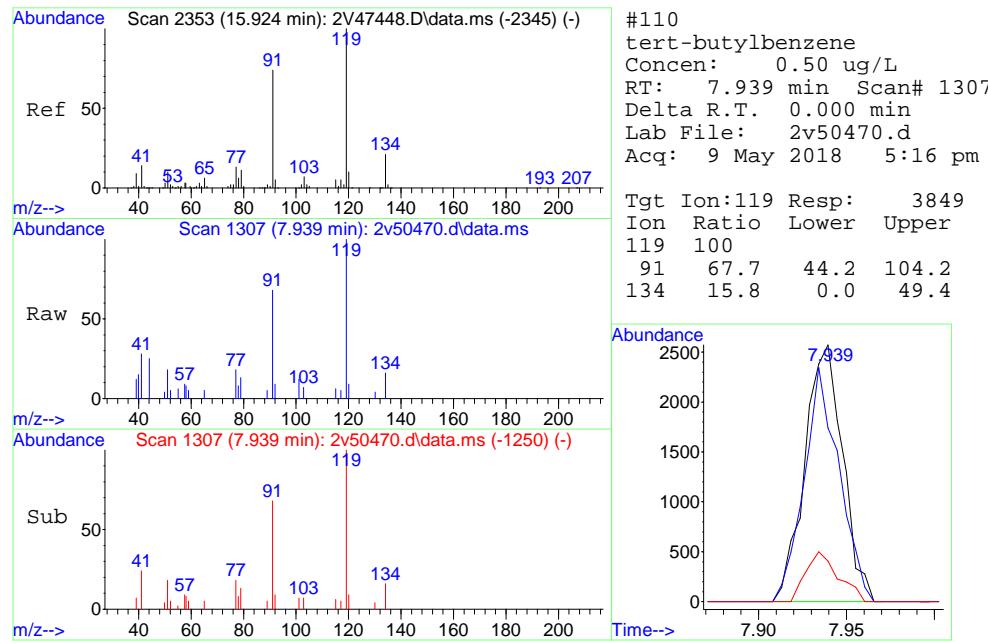
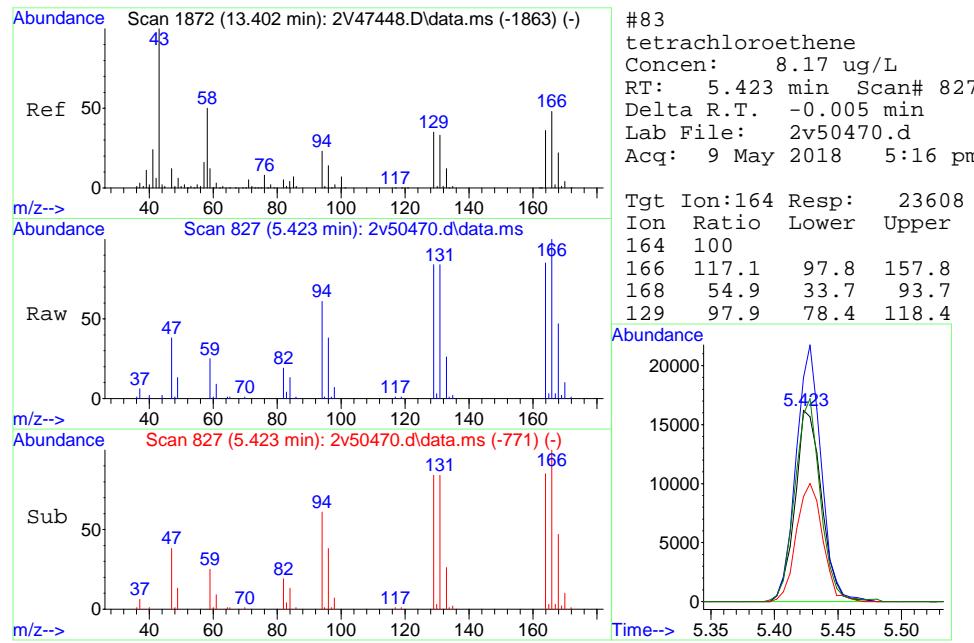
Quant Time: May 21 09:23:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

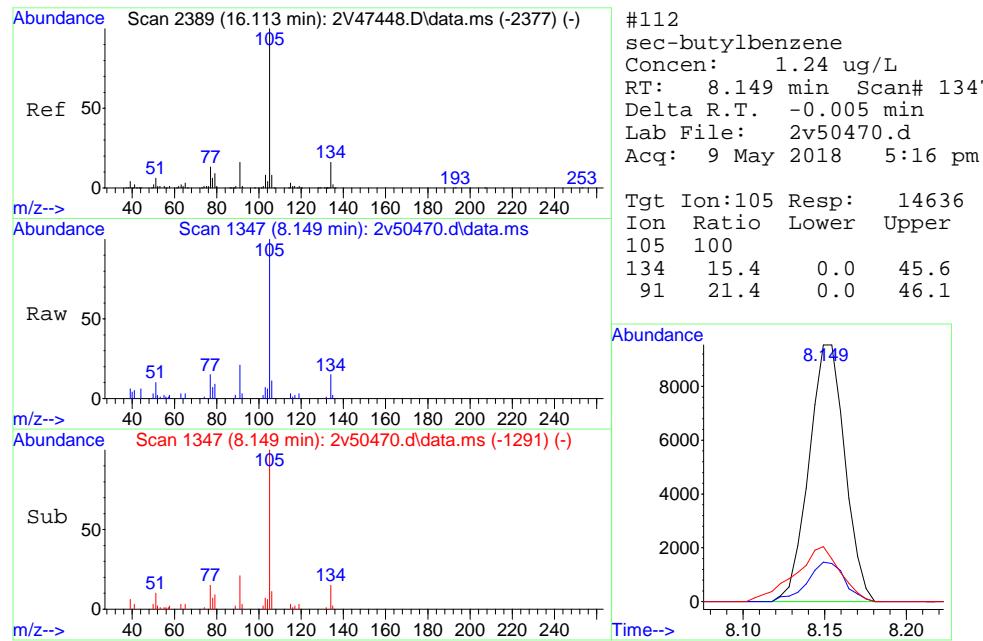












7.117

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241514.d
 Acq On : 8 May 2018 5:18 pm
 Operator : oyinadei
 Sample : JC65632-17 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:11:08 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

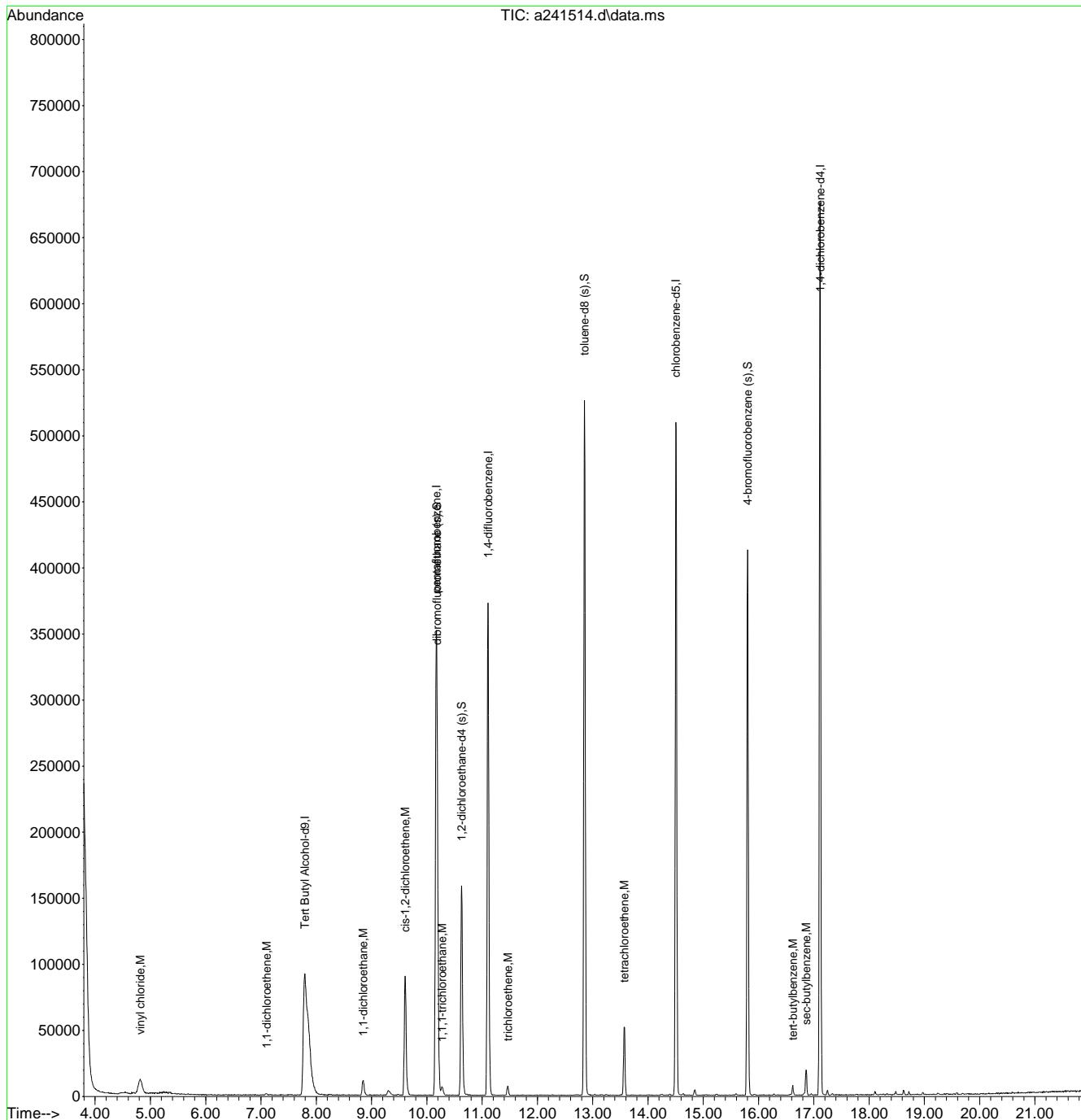
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.790	65	370849	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	245746	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.105	114	353902	50.00	ug/L	0.00
76) chlorobenzene-d5	14.505	117	326344	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.115	152	204213	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.185	113	120881	49.35	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.70%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	122859	48.73	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	97.46%	
77) toluene-d8 (s)	12.852	98	386999	44.38	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	88.76%	
101) 4-bromofluorobenzene (s)	15.802	95	151601	45.58	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.16%	
<hr/>						
Target Compounds						
11) vinyl chloride	4.814	62	32438	6.66	ug/L	89
20) 1,1-dichloroethene	7.104	96	707	0.31	ug/L	88
33) 1,1-dichloroethane	8.846	63	16319	3.63	ug/L	95
39) cis-1,2-dichloroethene	9.610	96	50487	19.24	ug/L	85
49) 1,1,1-trichloroethane	10.274	97	6385	1.73	ug/L	93
64) trichloroethene	11.466	95	2680	1.34	ug/L	87
83) tetrachloroethene	13.574	166	18389	8.47	ug/L	93
111) tert-butylbenzene	16.618	134	946	0.43	ug/L #	76
113) sec-butylbenzene	16.864	105	15610	1.11	ug/L	94
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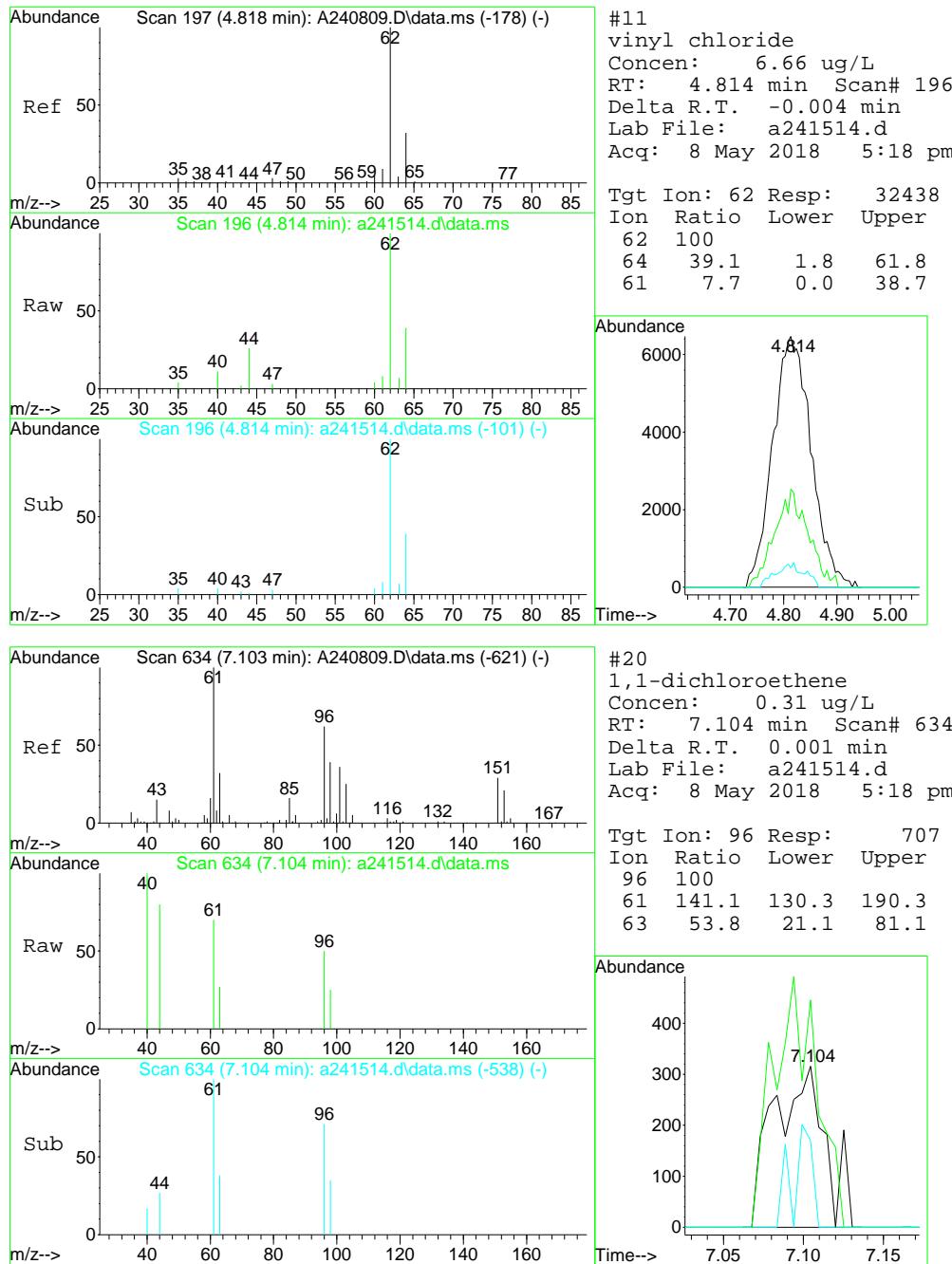
(#) = qualifier out of range (m) = manual integration (+) = signals summed

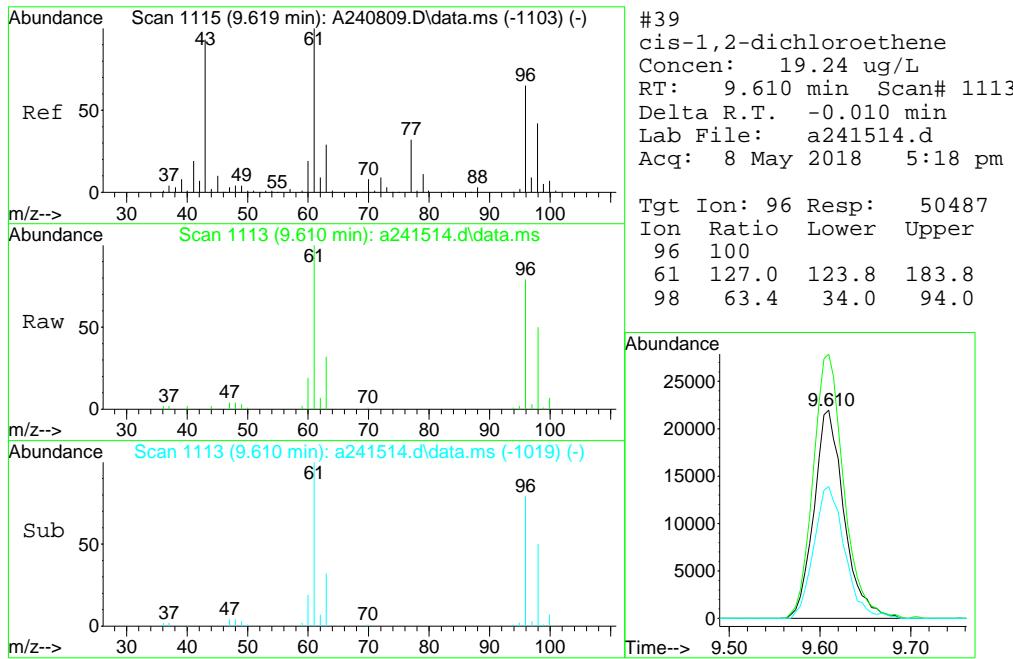
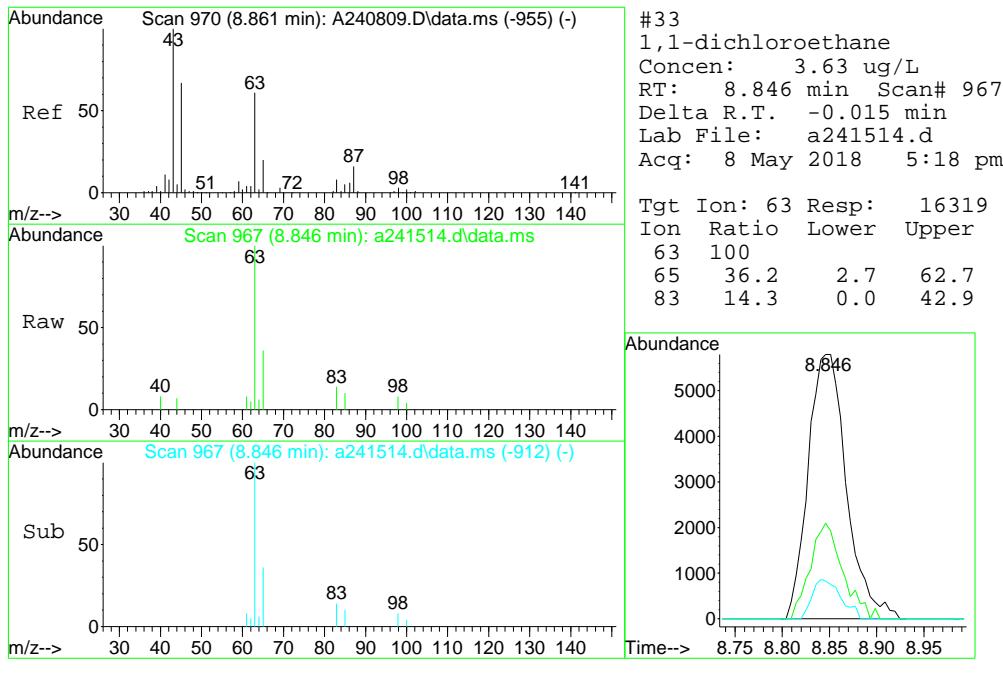
Quantitation Report (QT Reviewed)

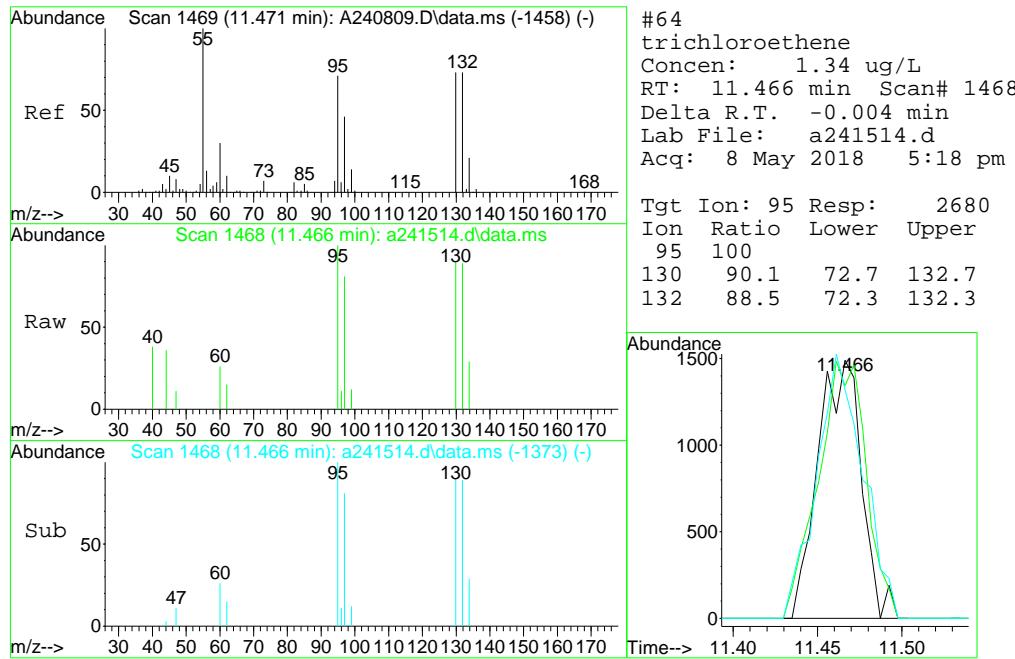
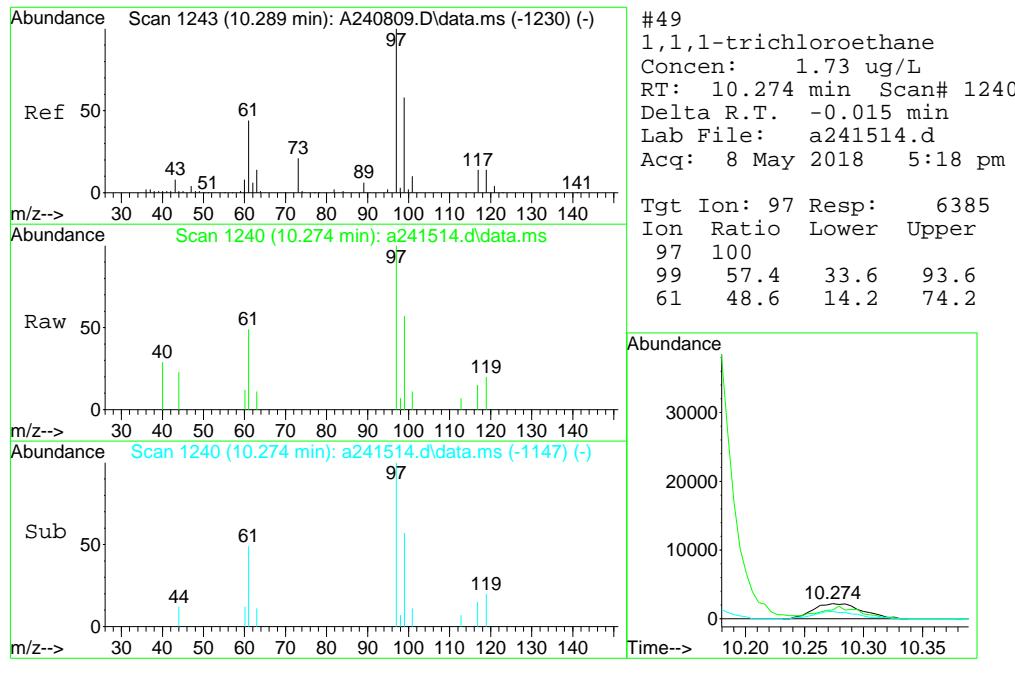
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241514.d
 Acq On : 8 May 2018 5:18 pm
 Operator : oyinadei
 Sample : JC65632-17
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 21 Sample Multiplier: 1

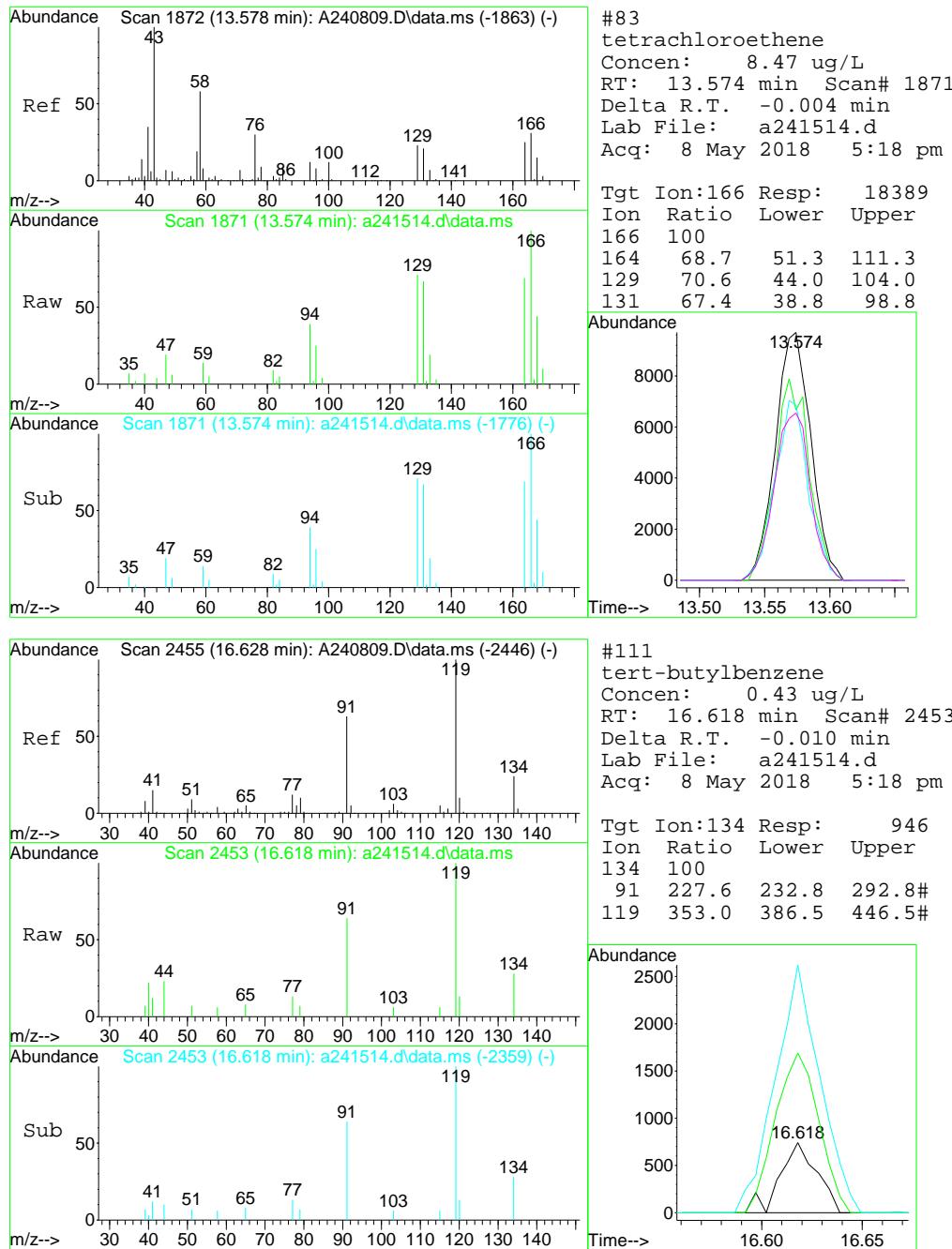
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:11:08 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

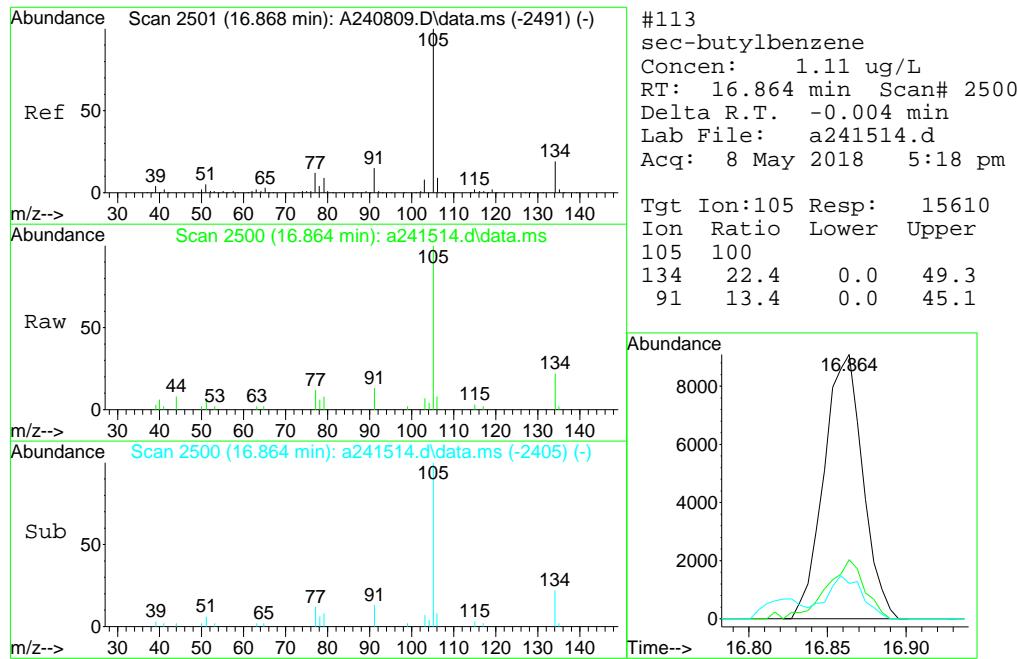












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50469.d
 Acq On : 9 May 2018 4:50 pm
 Operator : JessicaP
 Sample : JC65632-18 Inst : MS2V
 Misc : MS26140,V2V2014,5,,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 22:05:00 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

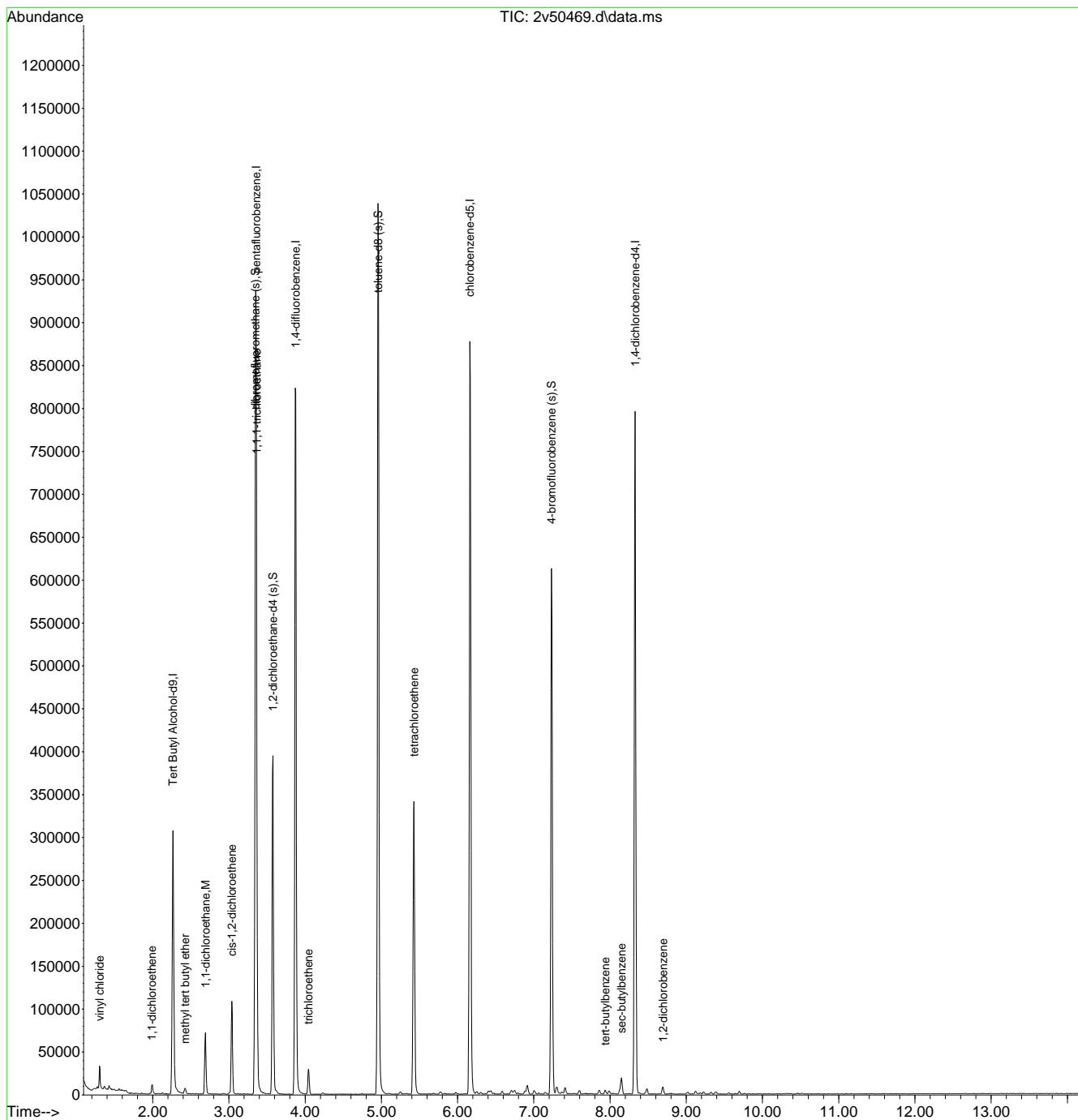
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	245722	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	283275	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	472351	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	357132	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	153508	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	162759	57.08	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 114.16%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	196632	59.90	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 119.80%		
77) toluene-d8 (s)	4.956	98	527350	57.16	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 114.32%		
100) 4-bromofluorobenzene (s)	7.232	95	164928	52.82	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 105.64%		
Target Compounds						
				Qvalue		
11) vinyl chloride	1.302	62	15389	3.14	ug/L	99
21) 1,1-dichloroethene	1.989	61	4543	0.83	ug/L	90
28) methyl tert butyl ether	2.424	73	3086	0.30	ug/L	94
33) 1,1-dichloroethane	2.691	63	47280	6.81	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	27350	7.17	ug/L	94
48) 1,1,1-trichloroethane	3.362	97	23224	4.10	ug/L #	1
63) trichloroethene	4.044	95	6654	1.57	ug/L	85
83) tetrachloroethene	5.428	164	57092	21.76	ug/L	99
110) tert-butylbenzene	7.934	119	1888	0.25	ug/L	90
112) sec-butylbenzene	8.149	105	10739	0.91	ug/L	96
116) 1,2-dichlorobenzene	8.694	146	1984	0.36	ug/L	93

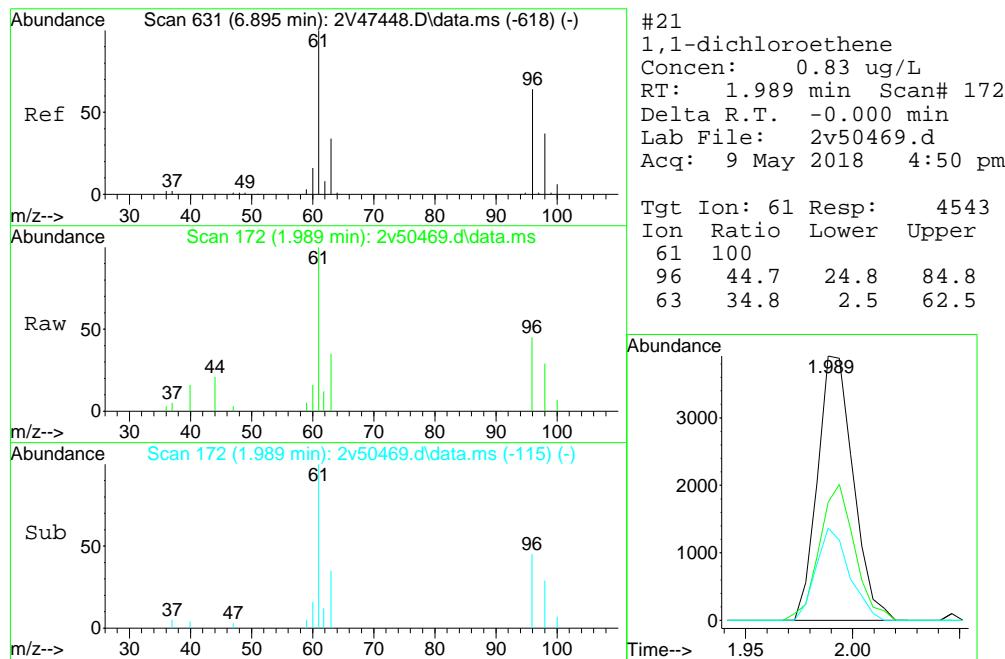
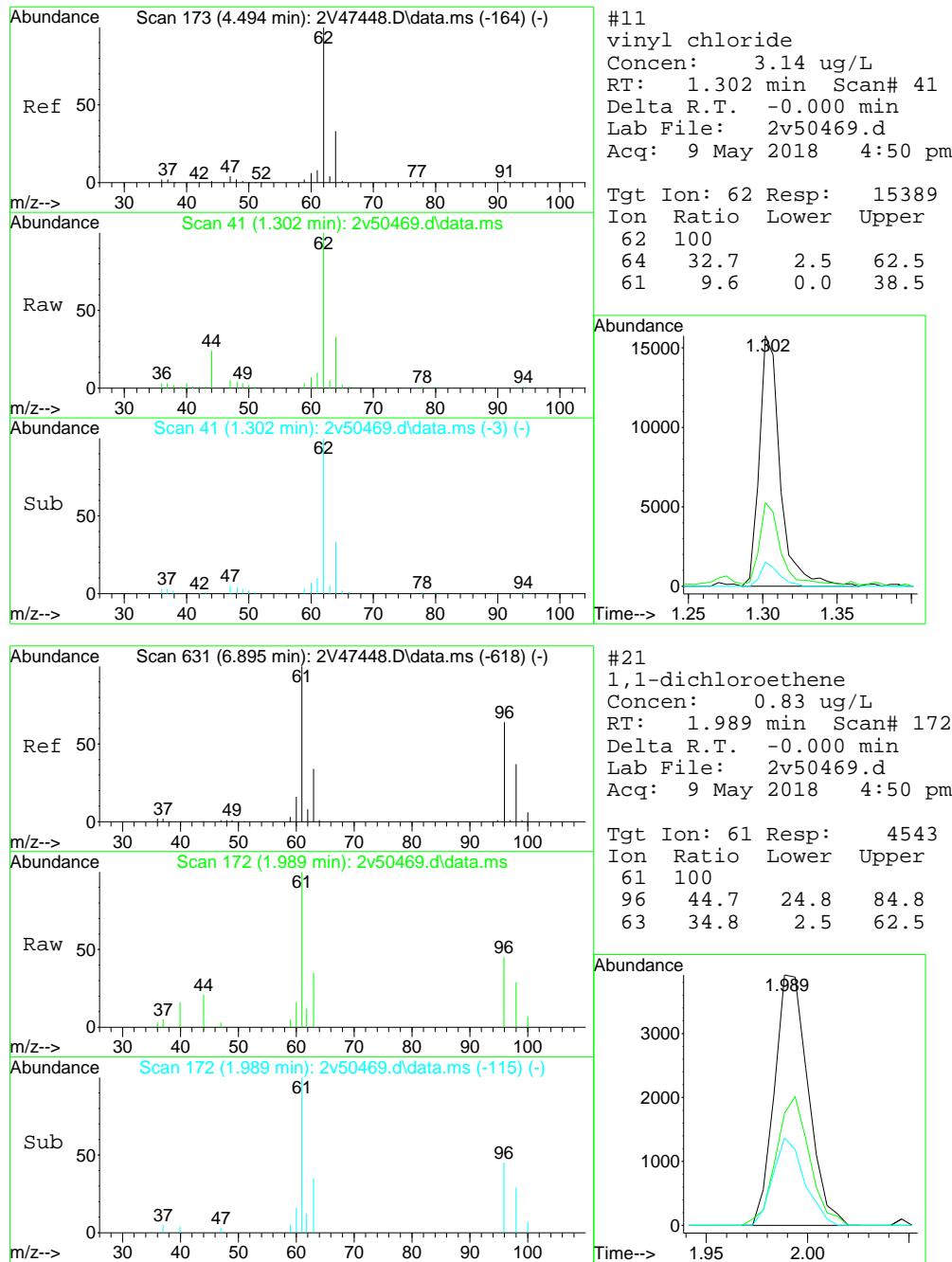
(#) = qualifier out of range (m) = manual integration (+) = signals summed

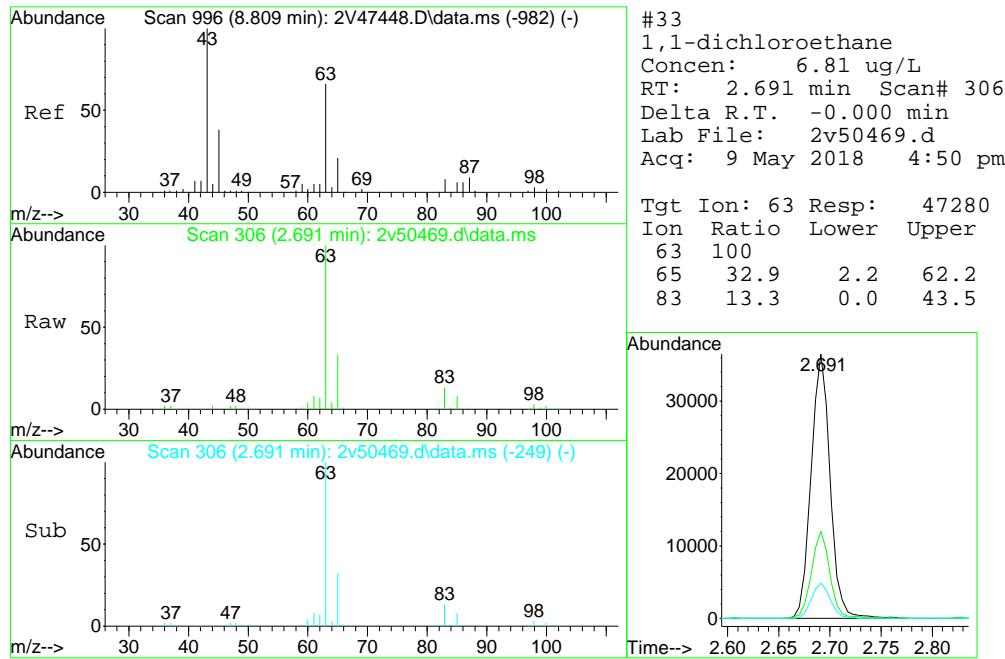
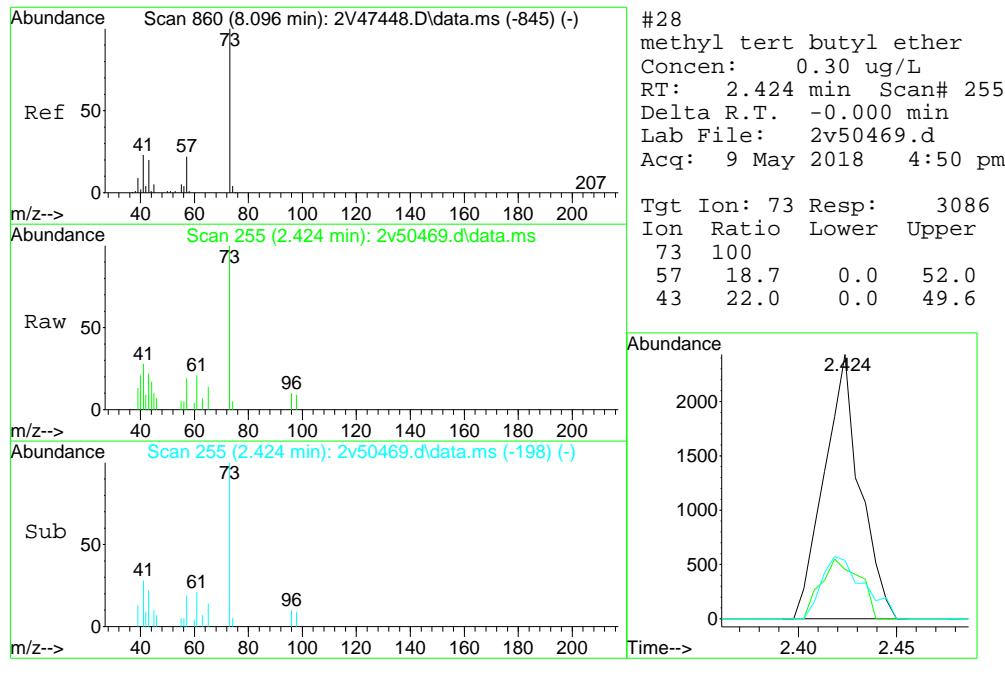
Quantitation Report (QT Reviewed)

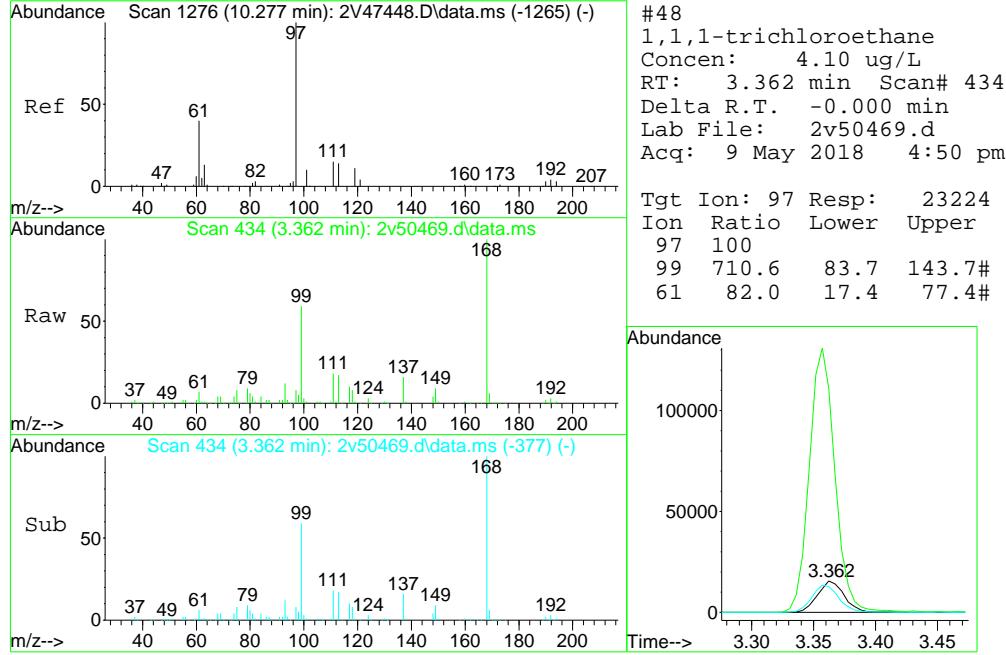
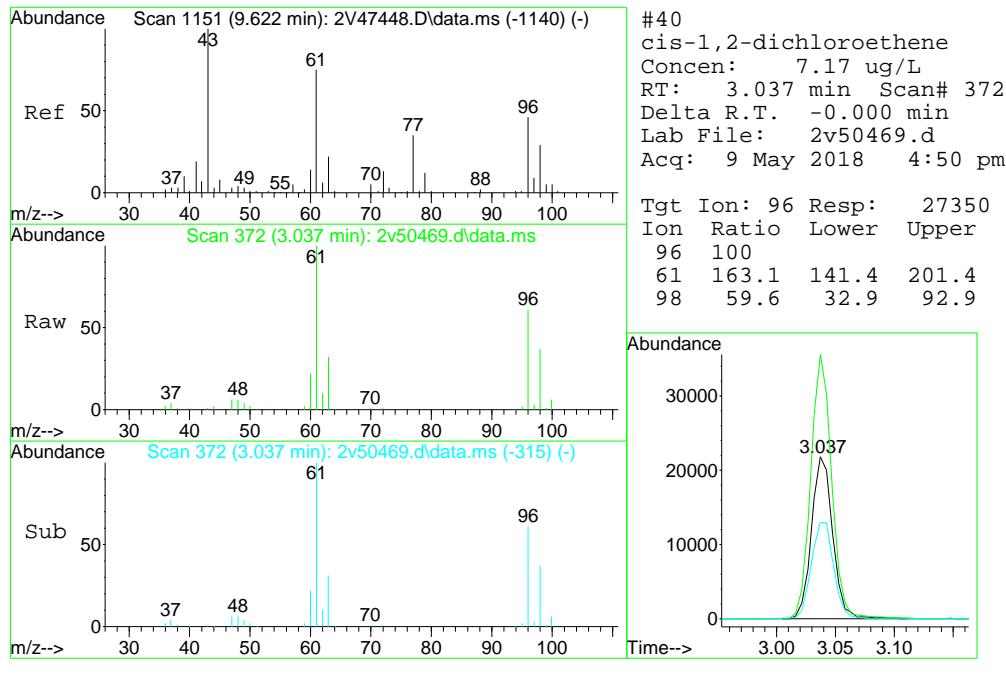
Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50469.d
 Acq On : 9 May 2018 4:50 pm
 Operator : JessicaP
 Sample : JC65632-18
 Inst : MS2V
 Misc : MS26140,V2V2014,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

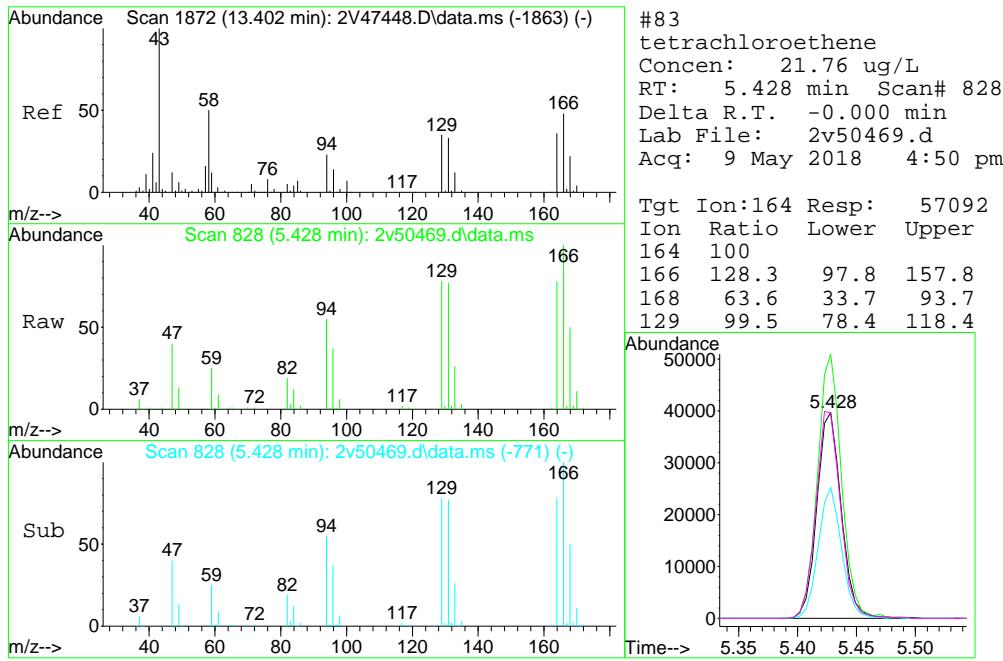
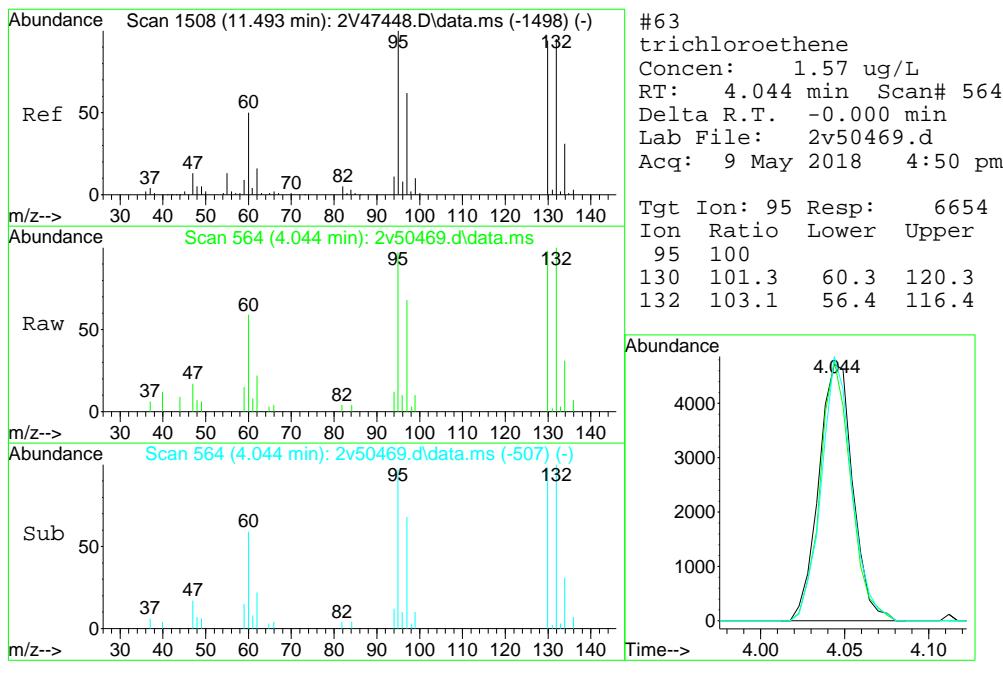
Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 22:05:00 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

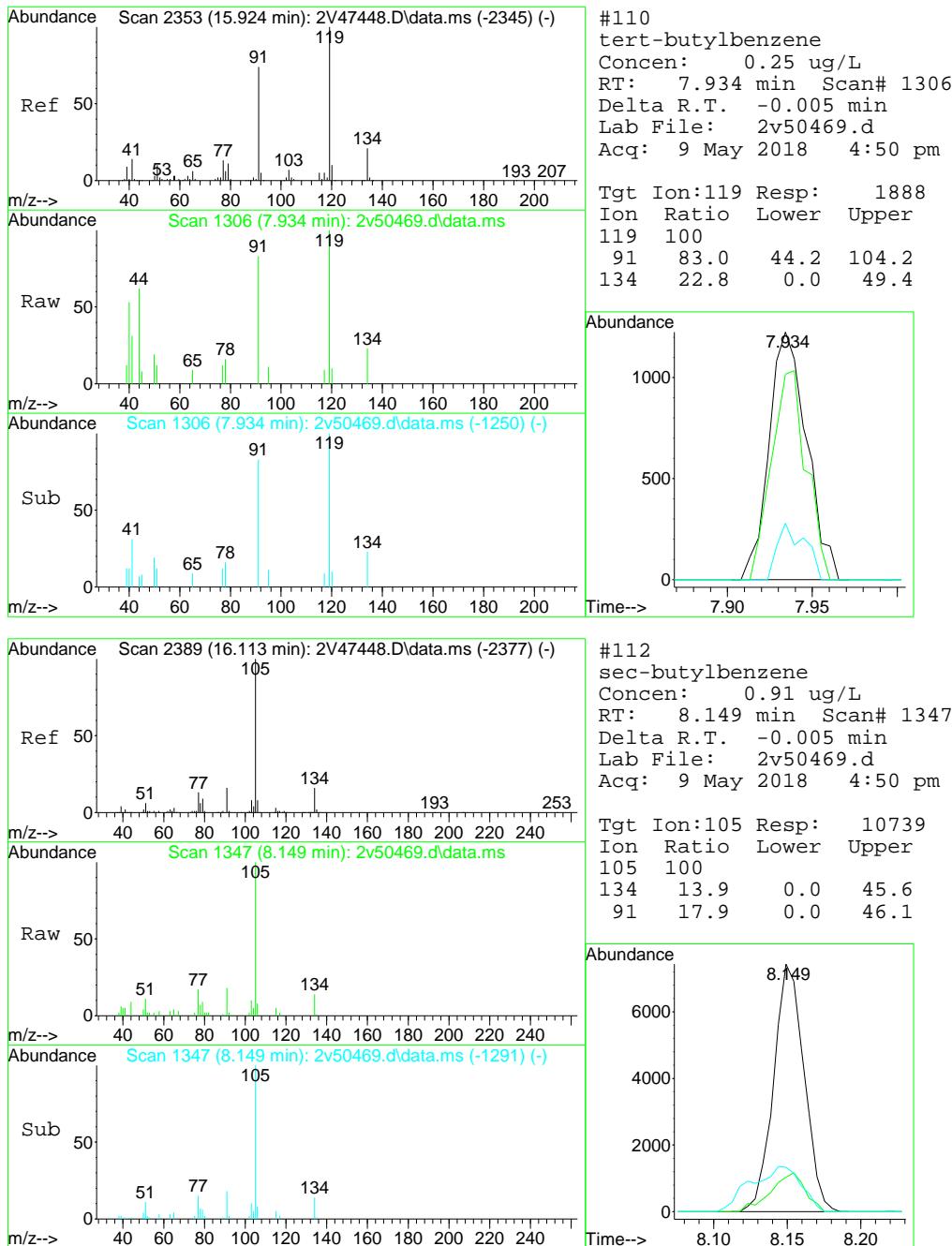


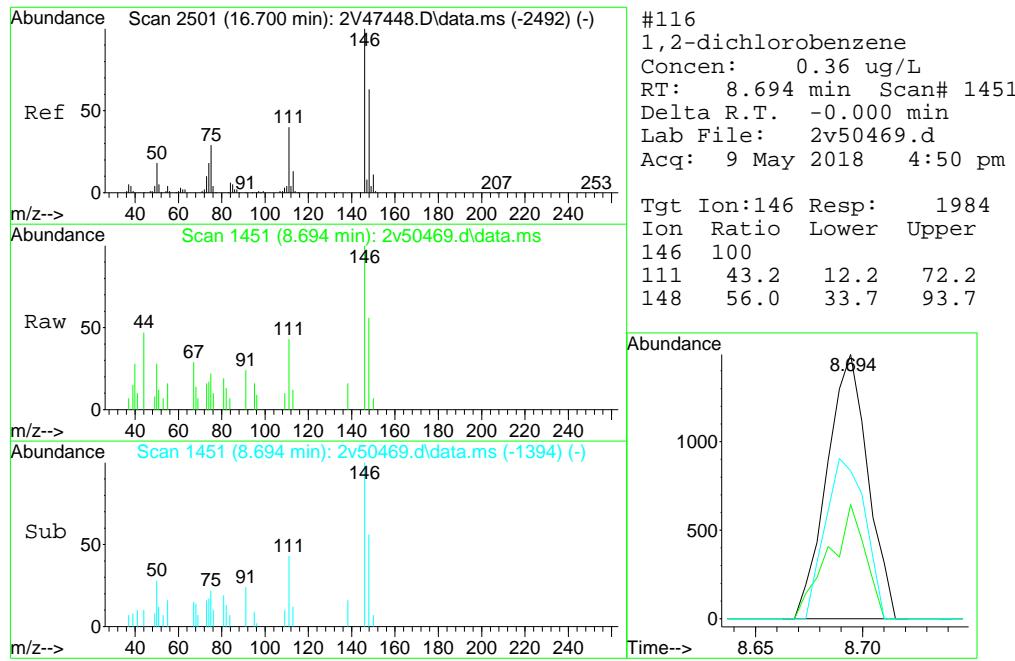












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241515.d
 Acq On : 8 May 2018 5:47 pm
 Operator : oyinadei
 Sample : JC65632-18 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 22 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:11:29 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

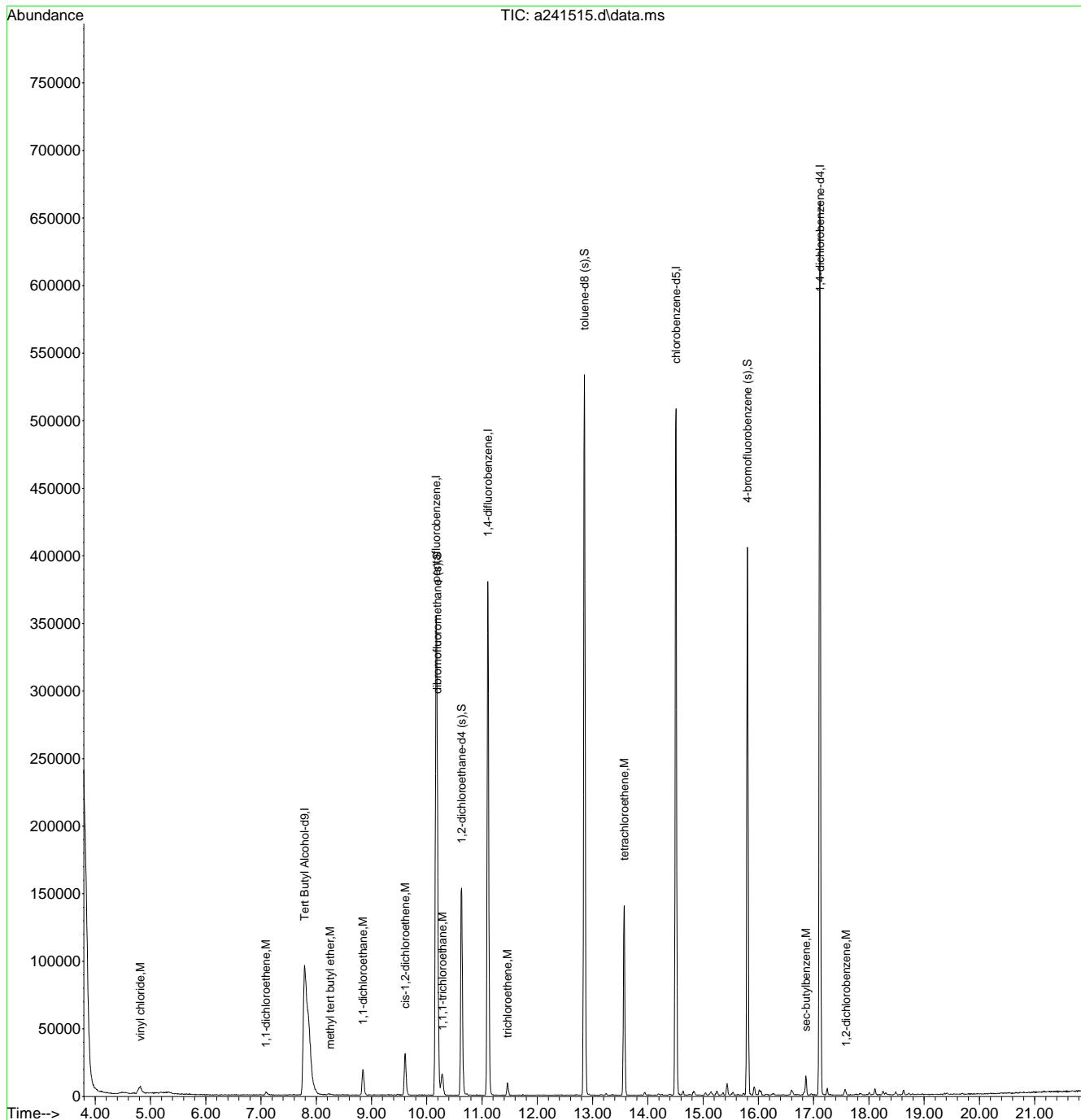
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.789	65	391322	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	244234	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.105	114	359234	50.00	ug/L	-0.01
76) chlorobenzene-d5	14.510	117	325271	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	198432	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	121355	49.85	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.70%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	121224	47.37	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	94.74%	
77) toluene-d8 (s)	12.852	98	394324	45.37	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	90.74%	
101) 4-bromofluorobenzene (s)	15.801	95	148672	46.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.00%	
<hr/>						
Target Compounds						
11) vinyl chloride	4.818	62	14645	3.03	ug/L	89
20) 1,1-dichloroethene	7.088	96	1628	0.72	ug/L	# 63
27) methyl tert butyl ether	8.249	73	2498	0.32	ug/L	# 51
33) 1,1-dichloroethane	8.845	63	24448	5.47	ug/L	94
39) cis-1,2-dichloroethene	9.609	96	17931	6.88	ug/L	# 79
49) 1,1,1-trichloroethane	10.284	97	15852	4.33	ug/L	94
64) trichloroethene	11.460	95	3470	1.70	ug/L	92
83) tetrachloroethene	13.573	166	47697	22.04	ug/L	97
113) sec-butylbenzene	16.858	105	11744	0.86	ug/L	97
117) 1,2-dichlorobenzene	17.585	146	1776	0.32	ug/L	86

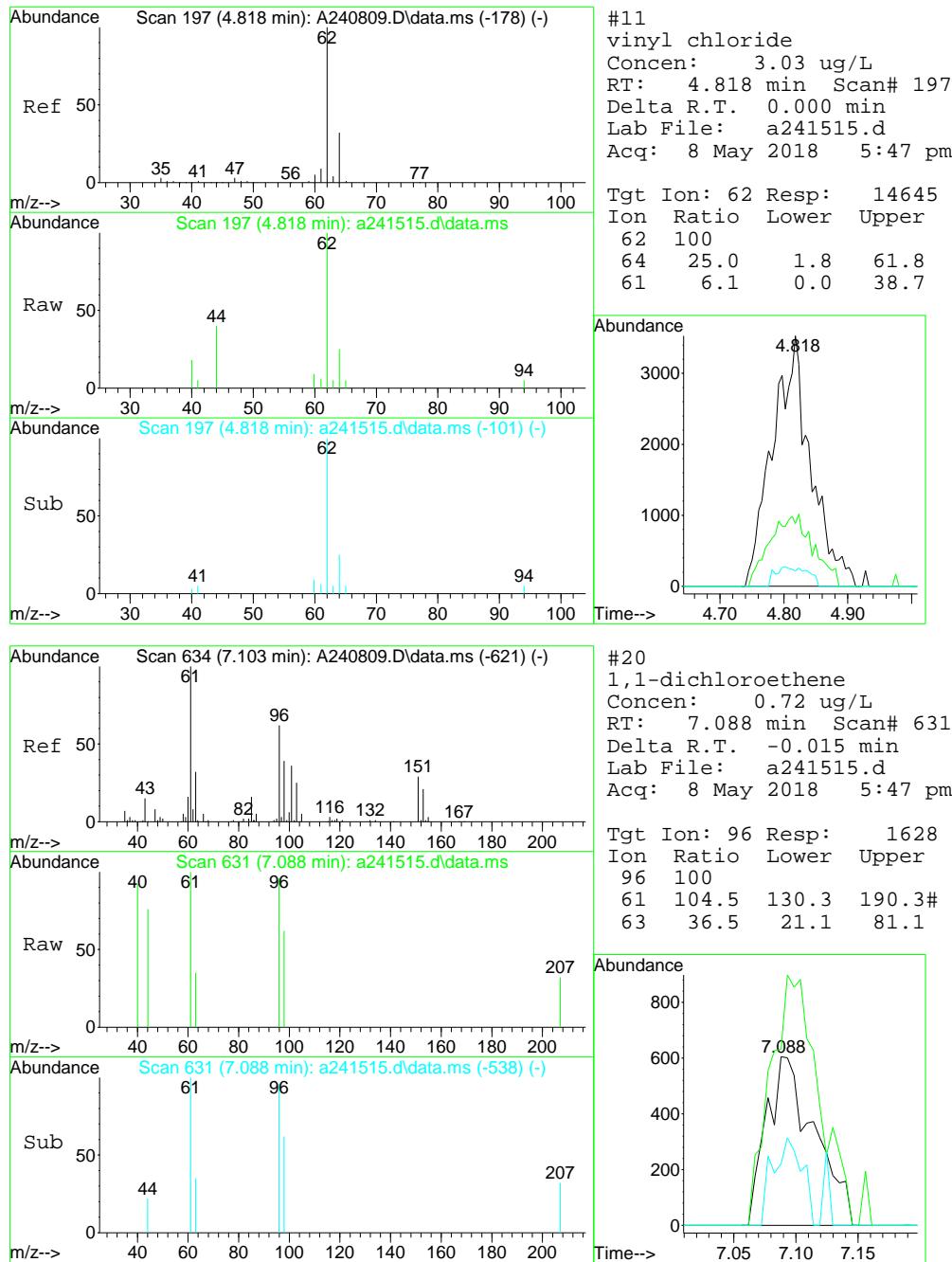
(#) = qualifier out of range (m) = manual integration (+) = signals summed

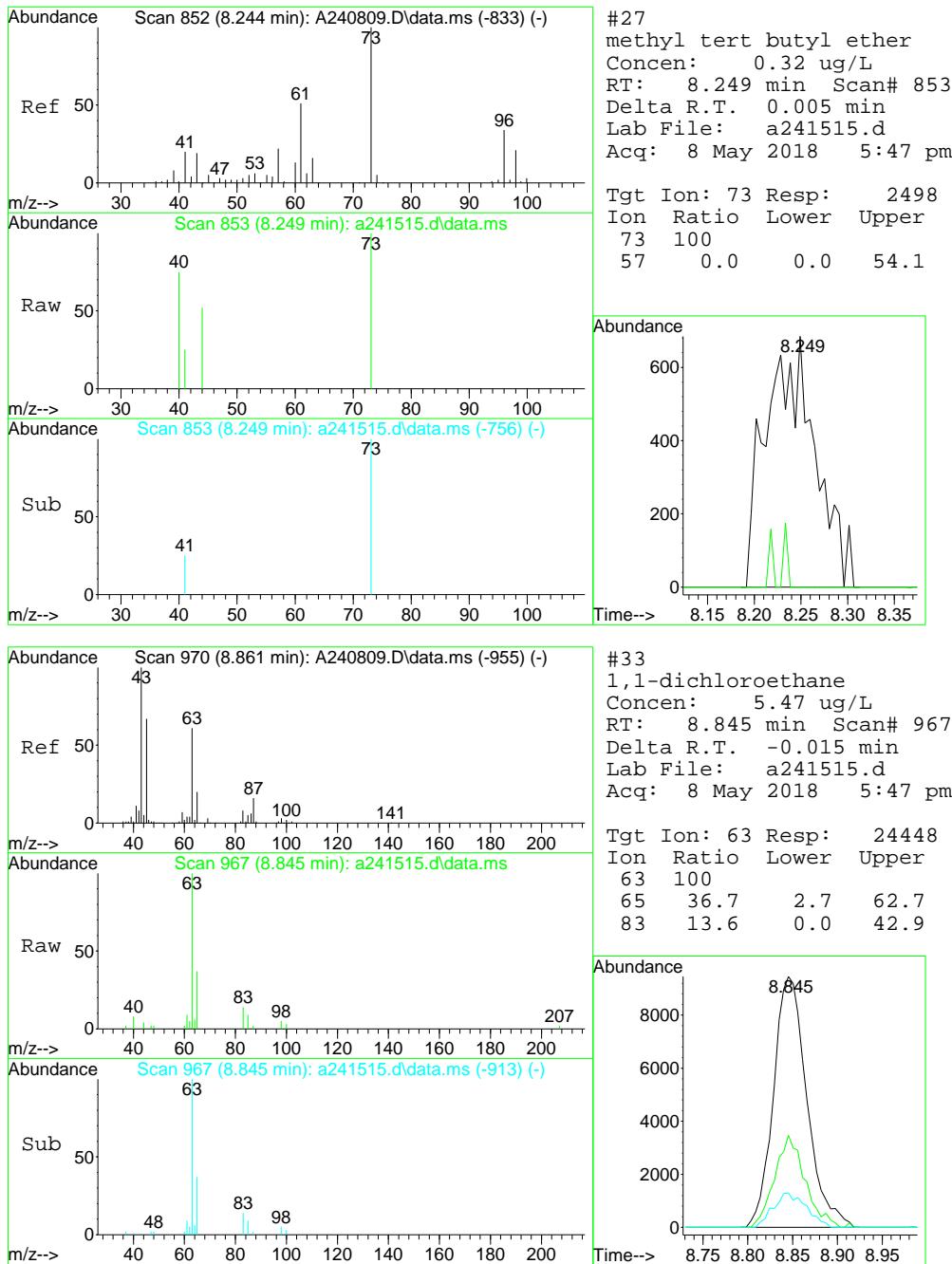
Quantitation Report (QT Reviewed)

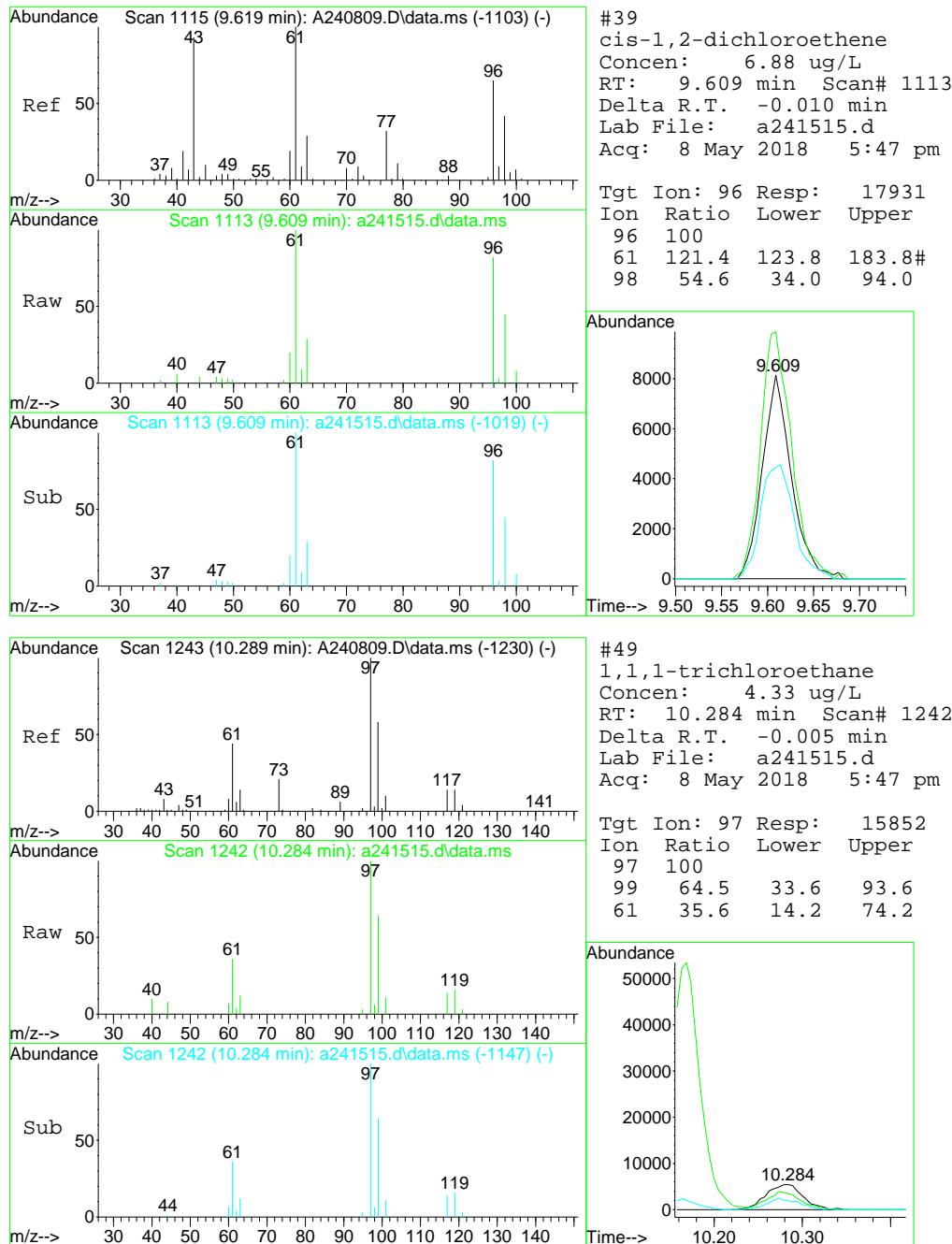
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241515.d
 Acq On : 8 May 2018 5:47 pm
 Operator : oyinadei
 Sample : JC65632-18
 Inst : MSA
 Misc : MS26140,VA9204,,,,1
 ALS Vial : 22 Sample Multiplier: 1

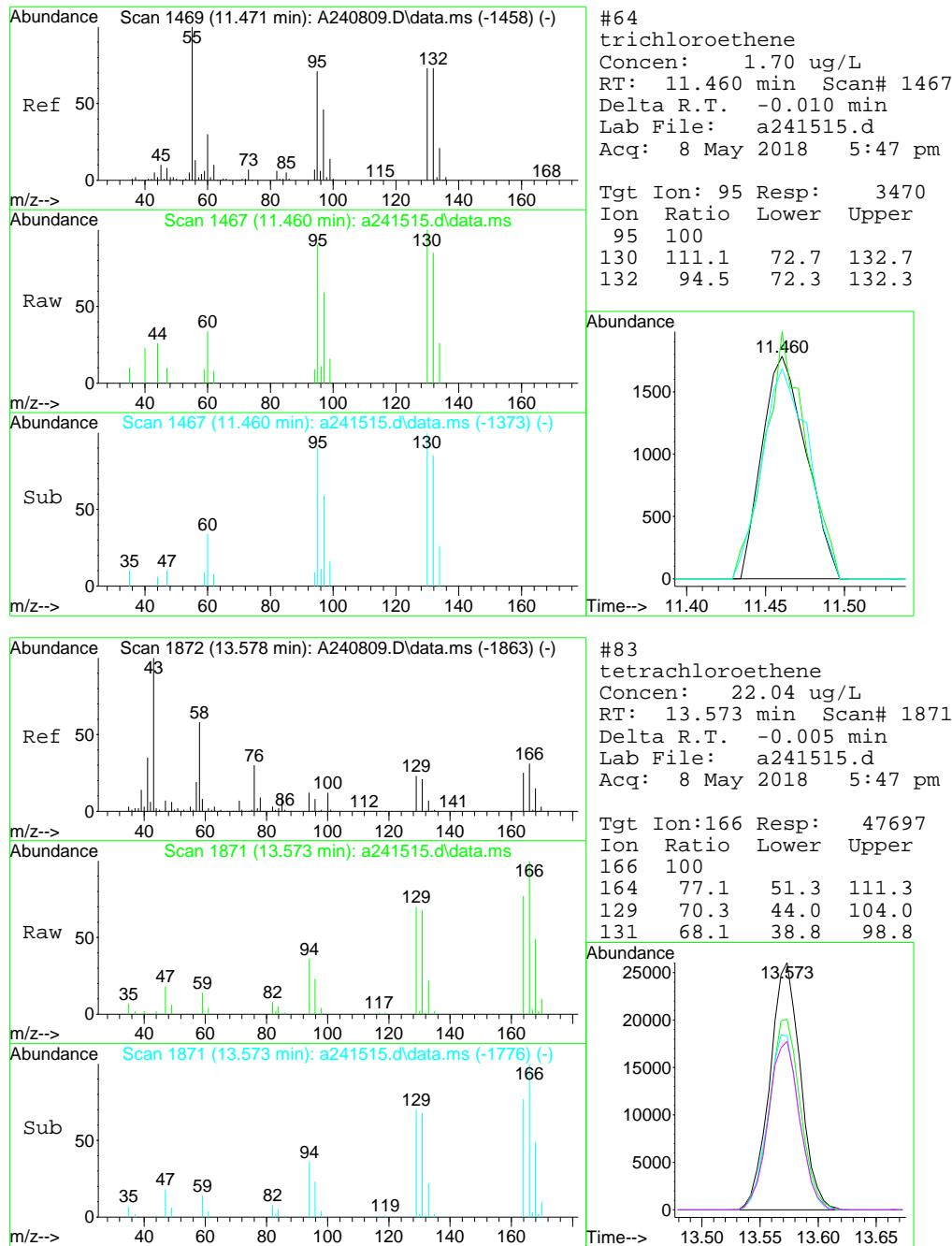
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:11:29 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

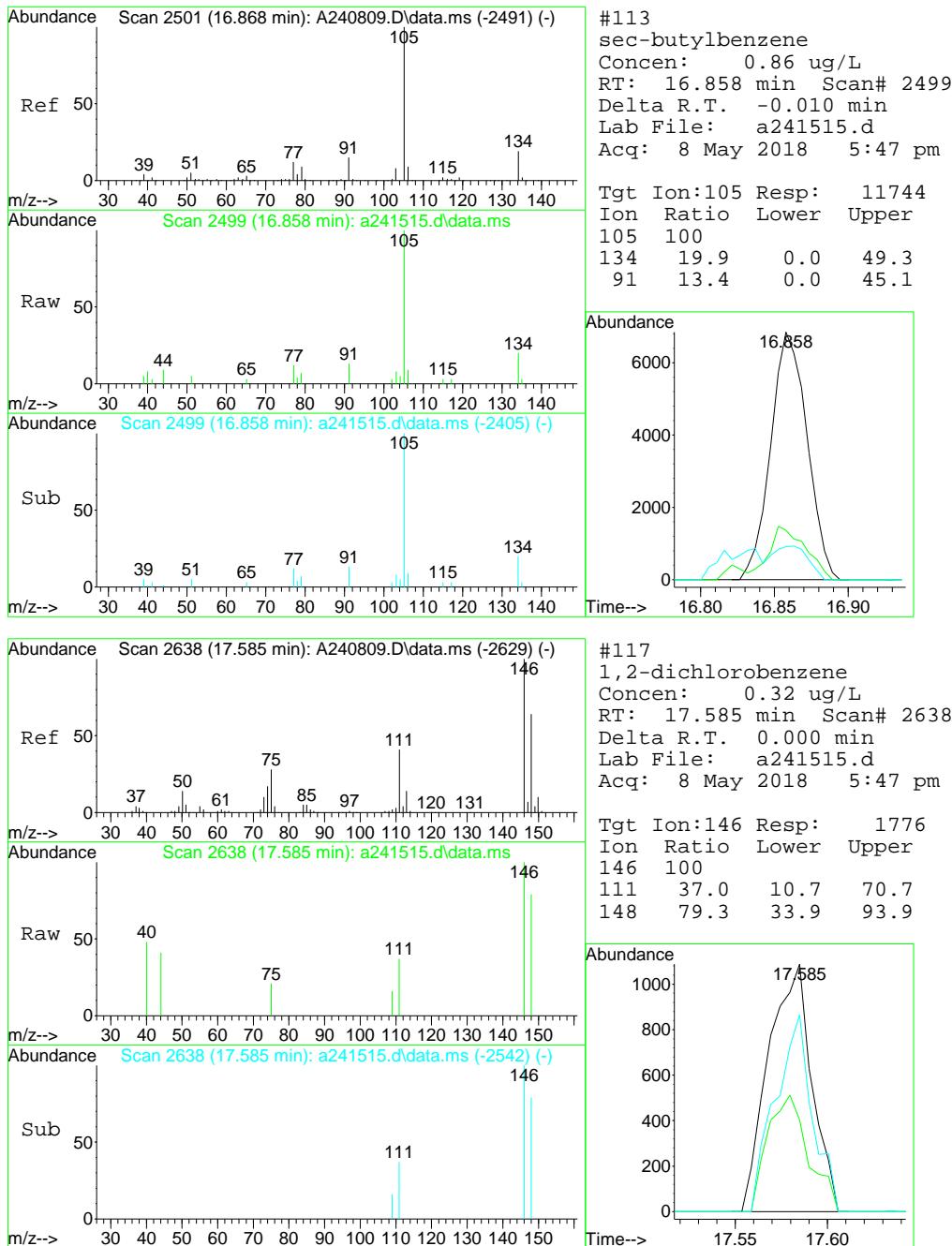












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241516.d
 Acq On : 8 May 2018 6:17 pm
 Operator : oyinadei
 Sample : JC65632-19 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:50:23 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.789	65	384305	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	240225	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.105	114	347411	50.00	ug/L	-0.01
76) chlorobenzene-d5	14.510	117	316387	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	199306	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	119482	49.90	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.80%		
55) 1,2-dichloroethane-d4 (s)	10.629	65	121735	49.19	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery =	98.38%		
77) toluene-d8 (s)	12.852	98	383177	45.32	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery =	90.64%		
101) 4-bromofluorobenzene (s)	15.802	95	149956	46.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	92.38%		

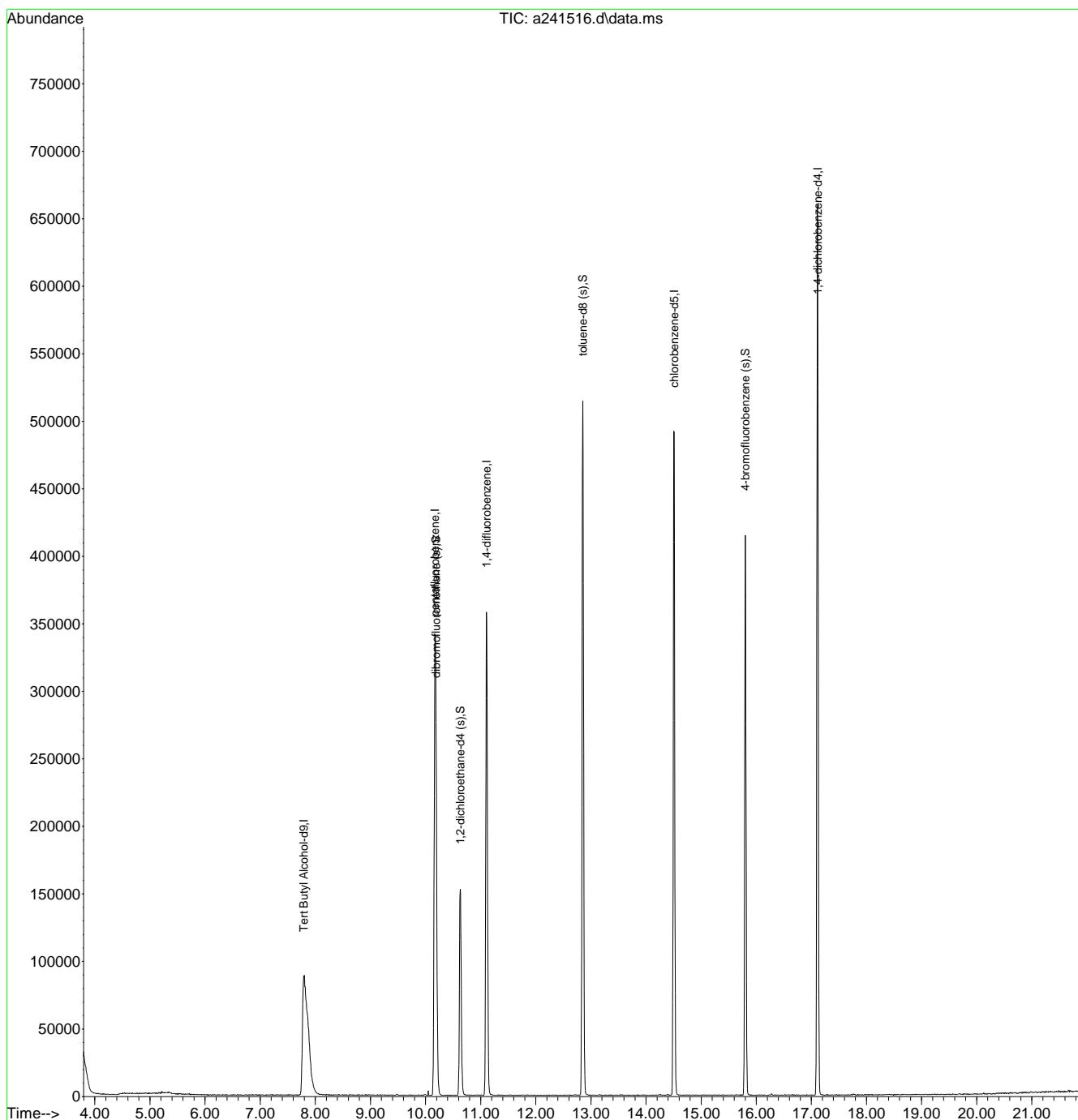
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241516.d
 Acq On : 8 May 2018 6:17 pm
 Operator : oyinadei
 Sample : JC65632-19 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 23 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:50:23 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241498.d
 Acq On : 8 May 2018 9:08 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:32:44 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	413671	500.00	ug/L	-0.02
5) pentafluorobenzene	10.168	168	260614	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.104	114	373923	50.00	ug/L	-0.01
76) chlorobenzene-d5	14.504	117	337927	50.00	ug/L	-0.01
100) 1,4-dichlorobenzene-d4	17.114	152	207897	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	127566	49.11	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.22%
55) 1,2-dichloroethane-d4 (s)	10.628	65	125939	47.28	ug/L	-0.02
Spiked Amount	50.000	Range	81 - 124	Recovery	=	94.56%
77) toluene-d8 (s)	12.851	98	405748	44.94	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	89.88%
101) 4-bromofluorobenzene (s)	15.801	95	156894	46.33	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.66%

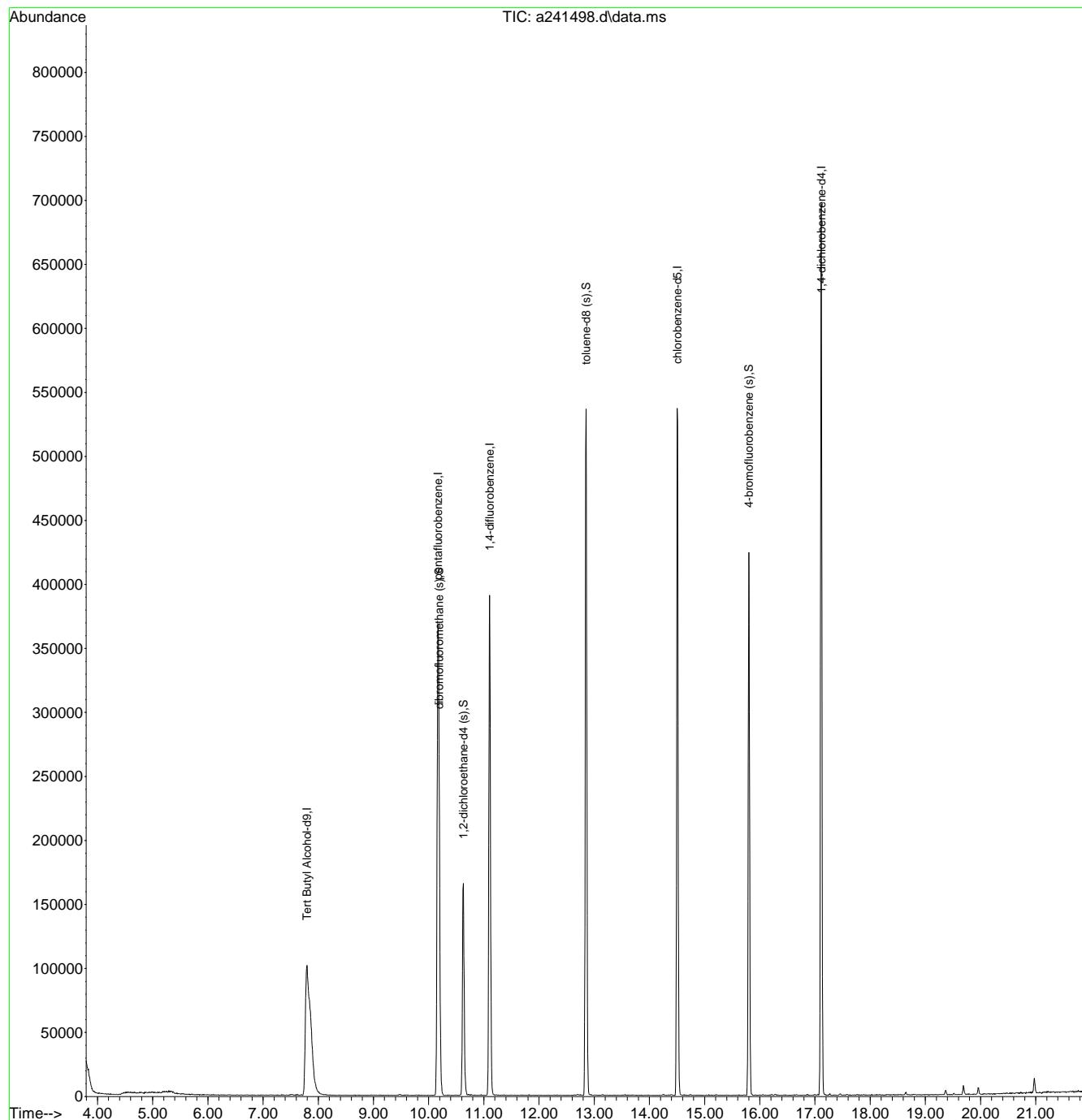
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241498.d
 Acq On : 8 May 2018 9:08 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:32:44 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81668.d
 Acq On : 8 May 2018 8:57 pm
 Operator : HueanhT
 Sample : MB Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:40:38 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) tert butyl alcohol-d9	6.791	65	146345	500.00	ug/L	0.02
5) pentafluorobenzene	8.768	168	222940	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	290426	50.00	ug/L	0.00
75) chlorobenzene-d5	12.832	117	290864	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	185476	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	106833	53.45	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	106.90%	
55) 1,2-dichloroethane-d4 (s)	9.207	65	104094	55.17	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	=	110.34%	
76) toluene-d8 (s)	11.236	98	347836	49.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.72%	
99) 4-bromofluorobenzene (s)	14.103	95	134631	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.00%	

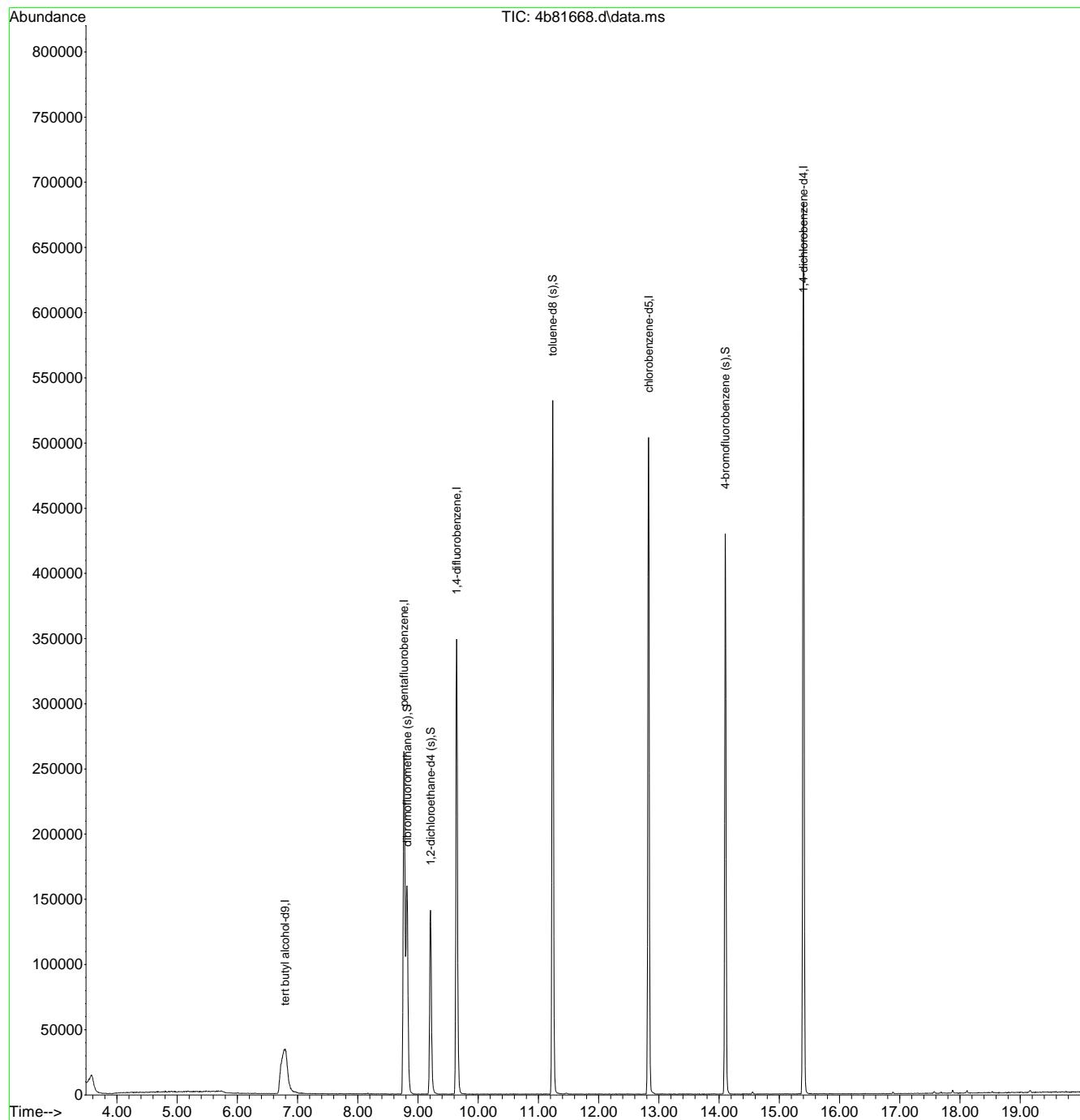
Target Compounds	Qvalue
<hr/>	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT/LSC Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81668.d
 Acq On : 8 May 2018 8:57 pm
 Operator : HueanhT
 Sample : MB Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:40:38 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50460.d
 Acq On : 9 May 2018 12:50 pm
 Operator : JessicaP
 Sample : mb Inst : MS2V
 Misc : MS26108,V2V2014,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:52:30 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	281486	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	363839	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	530740	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	407347	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.328	152	175141	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	195962	53.50	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	=	107.00%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	217268	58.90	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	=	117.80%	
77) toluene-d8 (s)	4.956	98	565696	53.76	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	=	107.52%	
100) 4-bromofluorobenzene (s)	7.232	95	191144	53.66	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	=	107.32%	

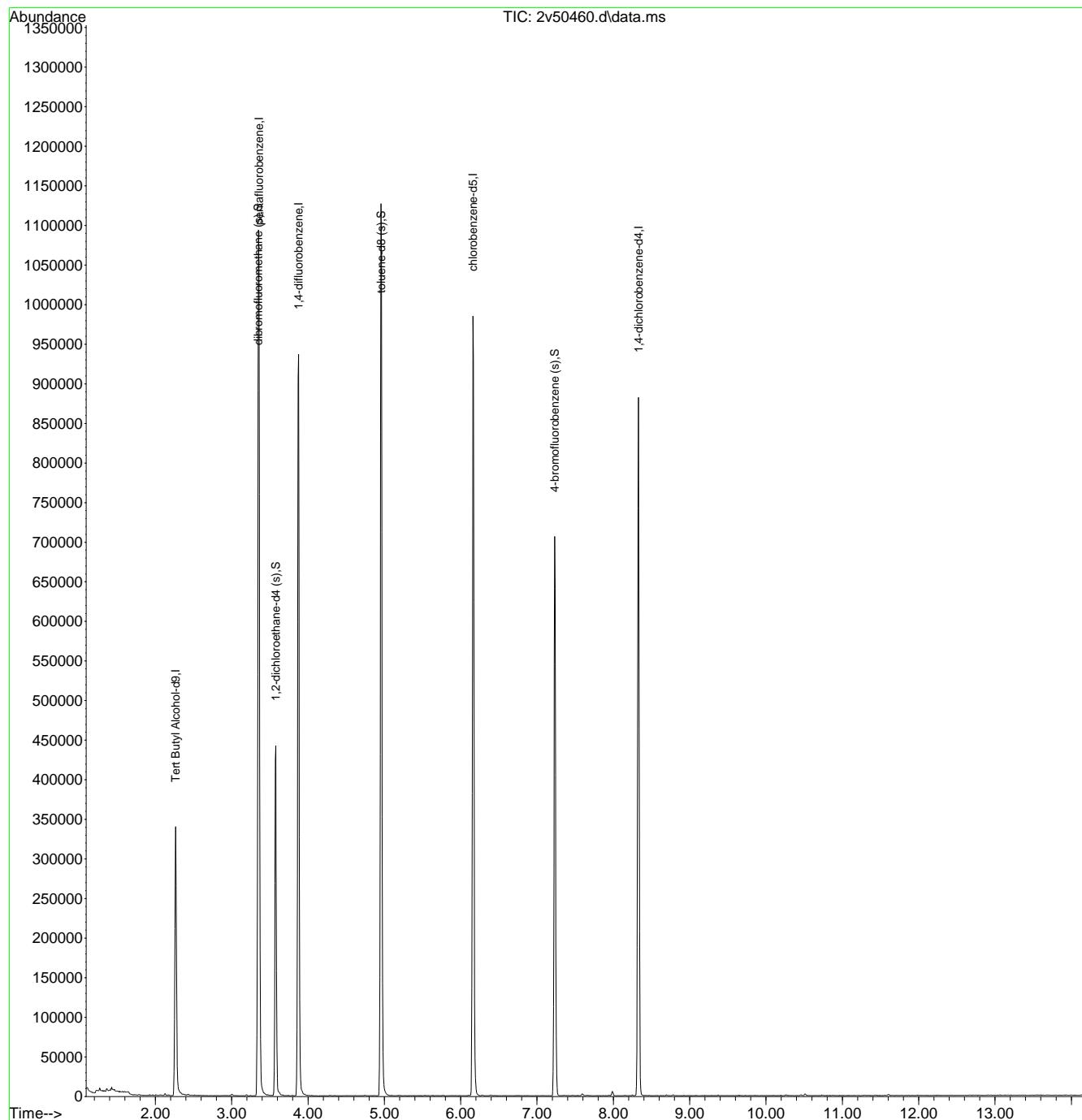
Target Compounds	Qvalue
<hr/>	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50460.d
 Acq On : 9 May 2018 12:50 pm
 Operator : JessicaP
 Sample : mb Inst : MS2V
 Misc : MS26108,V2V2014,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:52:30 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\marianng\05-14-18\v2v2015\
 Data File : 2v50480.d
 Acq On : 10 May 2018 8:05 am
 Operator : JessicaP
 Sample : mb2 Inst : MS2V
 Misc : MS26169,V2V2014,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 14 03:11:17 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Thu May 10 07:41:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	259996	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	322928	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	470367	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	361137	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	154635	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	3.346	113	171096	52.63	ug/L	0.00
Spiked Amount	50.000	Range	76 - 120	Recovery	=	105.26%
55) 1,2-dichloroethane-d4 (s)	3.577	65	198140	60.61	ug/L	0.00
Spiked Amount	50.000	Range	64 - 135	Recovery	=	121.22%
77) toluene-d8 (s)	4.956	98	482131	51.68	ug/L	0.00
Spiked Amount	50.000	Range	76 - 117	Recovery	=	103.36%
100) 4-bromofluorobenzene (s)	7.232	95	167186	53.15	ug/L	0.00
Spiked Amount	50.000	Range	72 - 122	Recovery	=	106.30%

Target Compounds

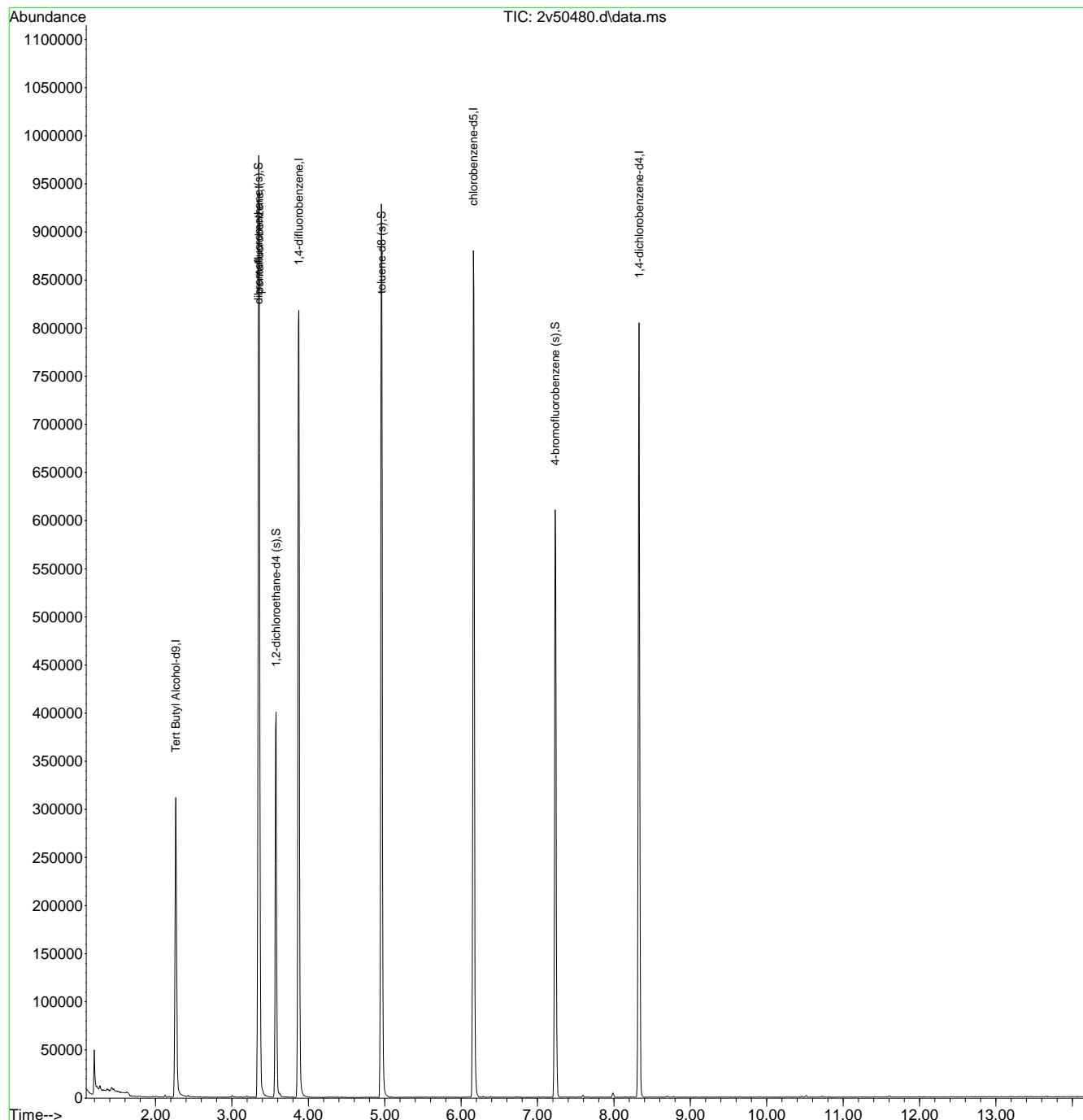
Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\mariannng\05-14-18\v2v2015\
 Data File : 2v50480.d
 Acq On : 10 May 2018 8:05 am
 Operator : JessicaP
 Sample : mb2 Inst : MS2V
 Misc : MS26169,V2V2014,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 14 03:11:17 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Thu May 10 07:41:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241548.d
 Acq On : 10 May 2018 10:54 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:03:28 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.799	65	265895	500.00	ug/L	-0.01
5) pentafluorobenzene	10.168	168	171793	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	243770	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	214995	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	132016	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	86128	50.30	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.60%
55) 1,2-dichloroethane-d4 (s)	10.629	65	85927	49.48	ug/L	-0.02
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.96%
77) toluene-d8 (s)	12.852	98	264986	46.13	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.26%
101) 4-bromofluorobenzene (s)	15.801	95	100377	46.68	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.36%

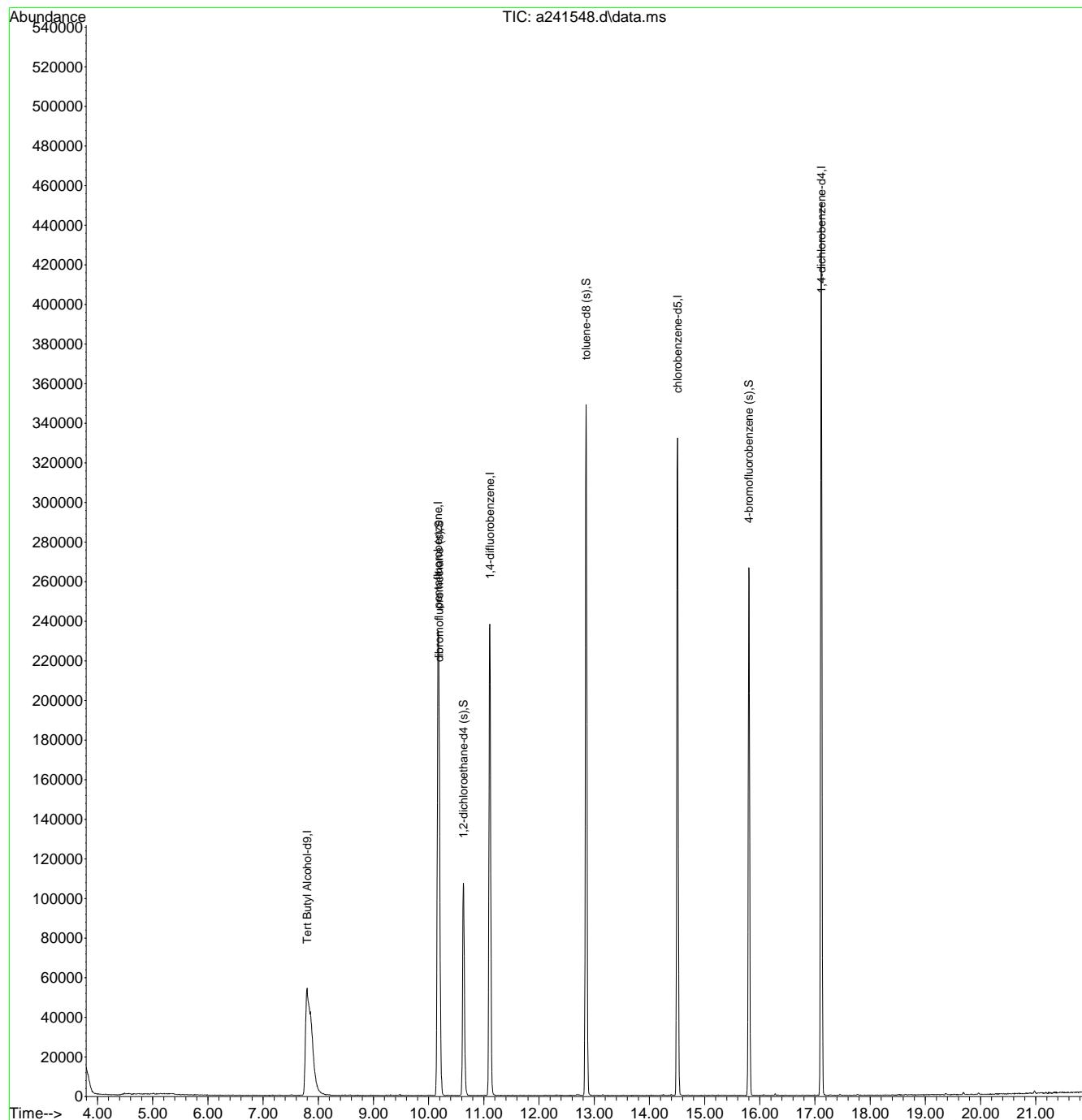
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241548.d
 Acq On : 10 May 2018 10:54 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:03:28 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	431368	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	268335	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.105	114	394996	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	359810	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.109	152	205198	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	131729	49.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.50%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	132774	47.19	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	94.38%	
77) toluene-d8 (s)	12.852	98	438290	45.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.18%	
101) 4-bromofluorobenzene (s)	15.802	95	159861	47.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	95.66%	
Target Compounds						
3) tertiary butyl alcohol	7.920	59	207829	271.92	ug/L	95
4) 1,4-dioxane	11.848	88	65847	1369.77	ug/L	92
6) chlorodifluoromethane	4.196	51	178701	43.22	ug/L	96
7) dichlorodifluoromethane	4.180	85	241140	53.26	ug/L	95
10) chloromethane	4.541	50	285246	55.23	ug/L	99
11) vinyl chloride	4.829	62	322915	60.72	ug/L	99
13) bromomethane	5.514	94	202594	67.67	ug/L	97
14) chloroethane	5.697	64	150743	63.70	ug/L	97
15) vinyl bromide	6.089	106	180196	66.31	ug/L	99
16) trichlorofluoromethane	6.246	101	248479	58.71	ug/L	98
17) ethyl ether	6.659	74	74917	54.20	ug/L	88
18) acrolein	6.905	56	36604	45.58	ug/L	89
19) freon 113	7.114	151	132469	63.00	ug/L	99
20) 1,1-dichloroethene	7.093	96	130469	52.42	ug/L	98
21) acetone	7.130	58	72372	180.74	ug/L	91
22) acetonitrile	7.580	41	303076	472.27	ug/L	96
23) iodomethane	7.381	142	233494	46.50	ug/L	98
24) carbon disulfide	7.517	76	448596	46.68	ug/L	99
25) methylene chloride	7.847	84	153684	53.52	ug/L	90
26) methyl acetate	7.643	43	125938	42.37	ug/L	95
27) methyl tert butyl ether	8.239	73	517752	60.17	ug/L	97
28) trans-1,2-dichloroethene	8.255	96	126348	50.68	ug/L	97
29) hexane	8.610	57	145431	40.63	ug/L	96
30) di-isopropyl ether	8.872	45	435058	45.58	ug/L	76
31) ethyl tert-butyl ether	9.358	59	471479	54.58	ug/L	97
32) 2-butanone	9.573	72	86336	201.56	ug/L #	75
33) 1,1-dichloroethane	8.846	63	227181	46.22	ug/L	97
34) chloroprene	8.971	53	166604	44.20	ug/L	95
35) acrylonitrile	8.176	53	67982	46.28	ug/L	95
36) vinyl acetate	8.840	86	25024	50.39	ug/L #	51
37) ethyl acetate	9.609	45	24315	44.92	ug/L #	22
38) 2,2-dichloropropane	9.635	77	240877	57.19	ug/L	94
39) cis-1,2-dichloroethene	9.609	96	143525	50.10	ug/L	95
40) methyl acrylate	9.682	85	23430	47.01	ug/L #	66
41) propionitrile	9.661	54	307839	335.88	ug/L	75
42) bromochloromethane	9.923	128	72897	46.57	ug/L	92
43) tetrahydrofuran	9.975	42	64376	39.96	ug/L	94
44) chloroform	9.986	83	212772	47.75	ug/L	98
45) tert-butyl formate	10.054	59	153815	56.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.865	67	62497	45.88	ug/L	89
48) cyclohexane	10.373	84	181242	43.88	ug/L	87
49) 1,1,1-trichloroethane	10.279	97	227928	56.63	ug/L	97
50) iso-butyl alcohol	10.430	43	130348	518.37	ug/L	99
51) 1,1-dichloropropene	10.456	75	152539	45.47	ug/L	97
52) carbon tetrachloride	10.493	117	195994	56.76	ug/L	99
53) tert-amyl alcohol	10.582	73	102364	280.78	ug/L	97
56) benzene	10.728	78	466622	47.09	ug/L	98
57) iso-octane	10.775	57	486511	49.91	ug/L	99
58) tert-amyl methyl ether	10.786	73	473054	54.85	ug/L	99
59) heptane	10.943	71	83512	44.80	ug/L	97
60) isopropyl acetate	10.655	87	33003	53.83	ug/L #	75
61) 1,2-dichloroethane	10.723	62	148228	47.22	ug/L	99
62) n-butyl alcohol	11.204	56	409648	2674.50	ug/L	95
63) ethyl acrylate	11.466	55	161082	47.35	ug/L	97
64) trichloroethylene	11.461	95	111027	49.61	ug/L	99
65) 2-nitropropane	12.256	41	47527	39.55	ug/L #	59
66) methylcyclohexane	11.727	83	254319	50.80	ug/L	94
67) 2-chloroethyl vinyl ether	12.292	63	372617	253.54	ug/L	98
68) methyl methacrylate	11.743	100	36552	53.98	ug/L #	63
69) 1,2-dichloropropane	11.733	63	119518	45.25	ug/L	95
70) dibromomethane	11.884	93	78364	52.02	ug/L	98
71) bromodichloromethane	12.020	83	156877	51.14	ug/L	98
72) epichlorohydrin	12.407	57	90977	242.95	ug/L	99
73) cis-1,3-dichloropropene	12.517	75	187370	50.74	ug/L	95
74) 4-methyl-2-pentanone	12.637	58	290984	204.99	ug/L	91
75) 3-methyl-1-butanol	12.637	55	275579	1076.51	ug/L	93
78) toluene	12.930	92	266425	43.81	ug/L	98
79) trans-1,3-dichloropropene	13.119	75	165155	48.92	ug/L	97
80) ethyl methacrylate	13.140	69	163521	47.94	ug/L	92
81) 1,1,2-trichloroethane	13.354	83	88519	48.48	ug/L	97
82) 2-hexanone	13.563	58	261366	199.79	ug/L	92
83) tetrachloroethylene	13.574	166	116893	48.83	ug/L	95
84) 1,3-dichloropropane	13.558	76	169190	47.75	ug/L	99
85) butyl acetate	13.652	56	93979	50.53	ug/L	88
87) dibromochloromethane	13.840	129	122802	50.38	ug/L	100
88) 1,2-dibromoethane	14.013	107	118945	55.17	ug/L	98
89) n-butyl ether	14.478	57	493422	44.33	ug/L	97
90) chlorobenzene	14.541	112	297835	50.50	ug/L	98
91) 1,1,1,2-tetrachloroethane	14.609	131	144351	50.73	ug/L	98
92) ethylbenzene	14.614	91	511952	48.01	ug/L	100
93) m,p-xylene	14.735	106	406875	100.73	ug/L	98
94) o-xylene	15.200	106	222533	50.69	ug/L	99
95) styrene	15.205	104	332642	51.03	ug/L	99
96) butyl acrylate	15.007	55	244053	47.29	ug/L	96
97) bromoform	15.477	173	92970	59.10	ug/L	98
98) isopropylbenzene	15.592	105	596188	49.84	ug/L	99
99) cis-1,4-dichloro-2-butene	15.645	75	63057	52.83	ug/L	98
102) bromobenzene	16.021	156	137566	50.45	ug/L	96
103) 1,1,2,2-tetrachloroethane	15.896	83	191067	48.35	ug/L	98
104) trans-1,4-dichloro-2-b...	15.953	53	42047	55.00	ug/L	95
105) 1,2,3-trichloropropane	15.985	110	49802	52.97	ug/L	96
106) n-propylbenzene	16.053	91	640879	45.83	ug/L	100
107) 2-chlorotoluene	16.204	126	143414	50.20	ug/L	95
108) 4-chlorotoluene	16.314	91	360088	48.81	ug/L	97
110) 1,3,5-trimethylbenzene	16.220	105	513769	47.25	ug/L	99
111) tert-butylbenzene	16.618	134	108619	48.98	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
112) 1,2,4-trimethylbenzene	16.659	105	503885	47.51	ug/L	99
113) sec-butylbenzene	16.858	105	682332	48.15	ug/L	99
114) 1,3-dichlorobenzene	17.046	146	264824	50.79	ug/L	98
115) p-isopropyltoluene	16.994	119	564796	48.12	ug/L	99
116) 1,4-dichlorobenzene	17.141	146	265582	50.12	ug/L	100
117) 1,2-dichlorobenzene	17.575	146	281797	49.38	ug/L	99
119) n-butylbenzene	17.454	92	284415	46.12	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.417	157	53789	50.44	ug/L	94
122) 1,3,5-trichlorobenzene	18.642	180	257254	47.64	ug/L	99
123) 2-ethylhexyl acrylate	19.353	70	29648	7.25	ug/L	96
124) 1,2,4-trichlorobenzene	19.363	180	222563	47.53	ug/L	96
125) hexachlorobutadiene	19.515	225	100661	51.33	ug/L	98
126) naphthalene	19.688	128	587679	49.49	ug/L	99
127) 1,2,3-trichlorobenzene	19.960	180	211756	50.04	ug/L	97
128) hexachloroethane	17.883	201	101658	49.59	ug/L	99
129) 2-methylnaphthalene	20.974	142	122823	26.38	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.3.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\

Data File : a241496.d

Acq On : 8 May 2018 7:50 am

Operator : oyinadei

Sample : bs

Misc : MS26069,VA9204,5,,,.1

Inst : MSA

ALS Vial : 3 Sample Multipl

Quant Method : C:\MSDCHEM\1\METHODS\

Quant Results File: MA9165.RES

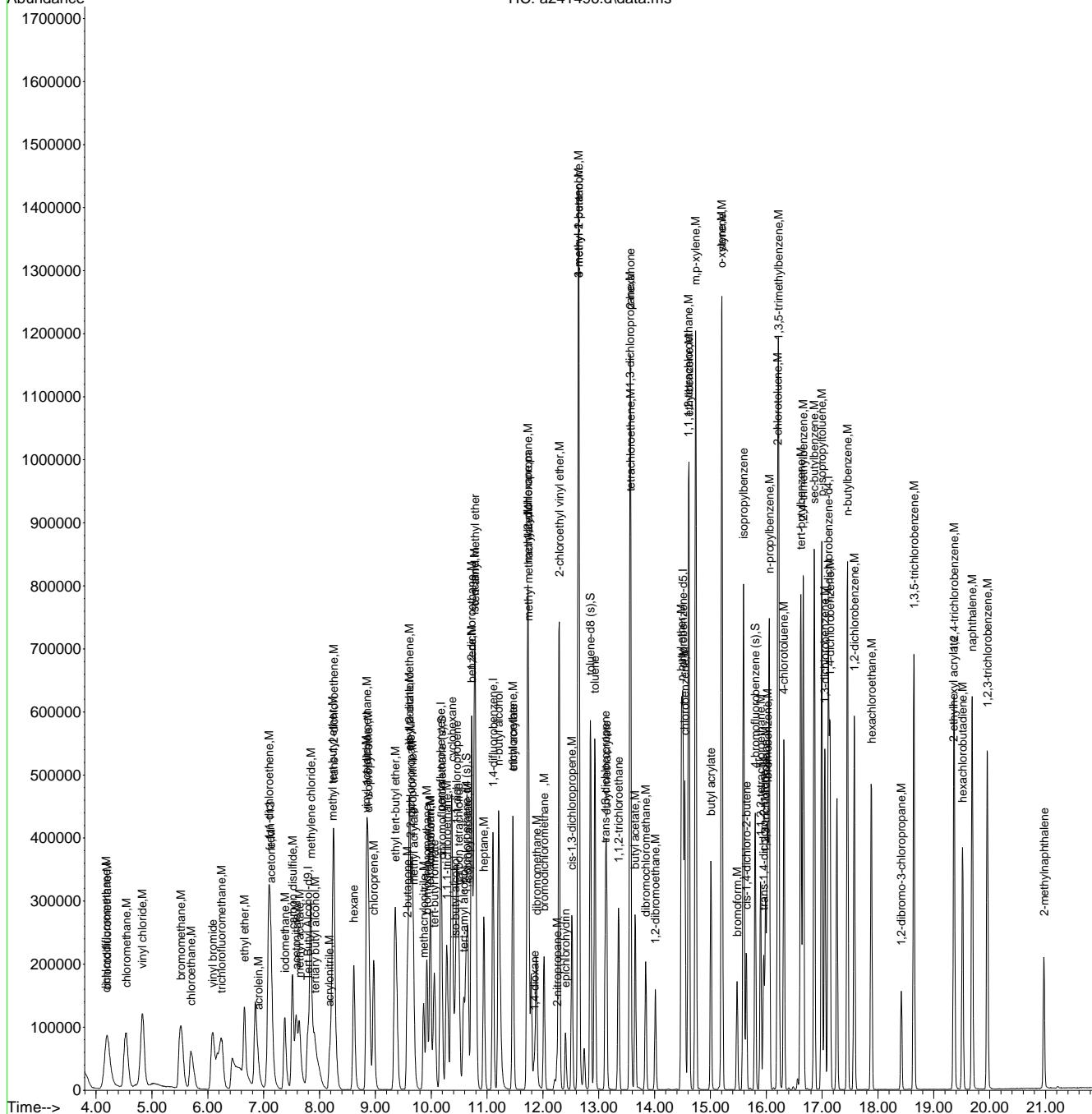
Quant Time: May 09 03:31:39 2018

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Tue Apr 17 15:31:

Response via : Initial Calibration

Notes: [View](#) | [Edit](#) | [Delete](#)



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81666.d
 Acq On : 8 May 2018 8:01 pm
 Operator : HueanhT
 Sample : BS Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:34 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.785	65	123545	500.00	ug/L	0.01
5) pentafluorobenzene	8.768	168	233560	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	307358	50.00	ug/L	0.00
75) chlorobenzene-d5	12.826	117	311206	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	202452	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.815	113	110407	52.72	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 105.44%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	103814	51.99	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 103.98%		
76) toluene-d8 (s)	11.236	98	370877	49.19	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.38%		
99) 4-bromofluorobenzene (s)	14.102	95	152314	51.82	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 103.64%		
Target Compounds						
3) tertiary butyl alcohol	6.890	59	79457	245.73	ug/L	97
4) 1,4-dioxane	10.258	88	35061	1180.10	ug/L	92
6) chlorodifluoromethane	3.909	51	238635	40.95	ug/L	98
7) dichlorodifluoromethane	3.898	85	337733	56.13	ug/L	99
8) chloromethane	4.254	50	425073	58.19	ug/L	99
9) vinyl chloride	4.468	62	339999	49.56	ug/L	99
10) 1,3-butadiene	4.432	54	19386	4.96	ug/L #	72
11) bromomethane	4.991	94	232650	47.16	ug/L	99
12) chloroethane	5.127	64	178586	48.15	ug/L	99
13) trichlorofluoromethane	5.530	101	317572	48.90	ug/L	98
14) vinyl bromide	5.420	106	227924	51.58	ug/L	97
15) ethyl ether	5.818	74	69753	51.52	ug/L	99
16) 2-chloropropane	6.027	43	279185	52.46	ug/L	99
17) acrolein	6.027	56	30044	51.70	ug/L	97
18) freon 113	6.226	151	172244	58.57	ug/L	99
19) 1,1-dichloroethene	6.205	61	261930	53.92	ug/L	98
20) acetone	6.199	58	44839	205.63	ug/L #	83
21) acetonitrile	6.576	41	214801	480.23	ug/L	100
22) iodomethane	6.435	142	283011	51.72	ug/L	98
23) carbon disulfide	6.566	76	559476	53.58	ug/L	99
24) methylene chloride	6.817	84	181339	51.03	ug/L	99
25) methyl acetate	6.571	43	92286	50.23	ug/L	98
26) methyl tert butyl ether	7.120	73	459327	50.62	ug/L	97
27) trans-1,2-dichloroethene	7.157	61	222483	52.09	ug/L	98
28) hexane	7.449	56	184725	96.87	ug/L	96
29) di-isopropyl ether	7.643	45	548316	52.32	ug/L	100
30) 2-butanone	8.224	72	43812	211.02	ug/L	92
31) 1,1-dichloroethane	7.664	63	266553	52.18	ug/L	99
32) chloroprene	7.753	53	189679	53.38	ug/L	97
33) acrylonitrile	7.068	53	52552	54.68	ug/L	99
34) vinyl acetate	7.580	86	15981	49.20	ug/L #	90
35) ethyl tert-butyl ether	8.051	59	502150	51.88	ug/L	98
36) ethyl acetate	8.229	45	15534	51.60	ug/L #	82
37) 2,2-dichloropropane	8.344	77	263709	52.07	ug/L	93
38) cis-1,2-dichloroethene	8.302	96	153959	50.91	ug/L	99
39) propionitrile	8.297	54	179080	496.80	ug/L	90
40) methyl acrylate	8.307	85	14158	50.55	ug/L	95
41) methacrylonitrile	8.475	67	40973	51.67	ug/L	97
42) bromochloromethane	8.569	128	74295	51.75	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81666.d
 Acq On : 8 May 2018 8:01 pm
 Operator : HueanhT
 Sample : BS Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:34 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	8.584	72	13953	50.03	ug/L #	81
44) chloroform	8.642	83	240866	51.72	ug/L	100
45) tert-butyl formate	8.679	59	143524	52.12	ug/L	97
47) 1,1,1-trichloroethane	8.898	97	280881	55.78	ug/L	96
48) cyclohexane	9.008	84	276061	52.12	ug/L	98
50) 1,1-dichloropropene	9.040	75	159040	52.54	ug/L	100
51) carbon tetrachloride	9.081	117	238122	55.92	ug/L	98
52) tert-amyl alcohol	9.155	73	31503	215.32	ug/L #	90
53) isopropyl acetate	9.160	87	21680	50.82	ug/L #	90
56) n-butyl alcohol	9.672	56	178836	2312.69	ug/L	99
57) 2,2,4-trimethylpentane	9.348	57	604046	52.60	ug/L	97
58) benzene	9.270	78	505037	51.22	ug/L	99
59) tert-amyl methyl ether	9.338	73	440639	50.14	ug/L	98
60) heptane	9.489	57	100408	51.55	ug/L	93
61) 1,2-dichloroethane	9.291	62	143724	49.57	ug/L	96
62) ethyl acrylate	9.908	55	119100	51.97	ug/L	100
63) trichloroethene	9.944	95	123180	52.27	ug/L	99
64) 2-chloroethyl vinyl ether	10.697	63	339971	260.98	ug/L	98
65) methyl methacrylate	10.164	100	25623	49.51	ug/L #	85
66) methylcyclohexane	10.237	83	322879	55.93	ug/L	98
67) 1,2-dichloropropane	10.222	63	134396	51.58	ug/L	99
68) dibromomethane	10.331	93	75492	52.27	ug/L	97
69) bromodichloromethane	10.473	83	171393	53.05	ug/L	100
70) 2-nitropropane	10.666	41	36084	49.96	ug/L	93
71) epichlorohydrin	10.792	57	51472	241.95	ug/L	97
72) cis-1,3-dichloropropene	10.922	75	190426	51.38	ug/L	97
73) 4-methyl-2-pentanone	11.017	58	188404	209.67	ug/L	94
74) isoamyl alcohol	11.011	70	75422	1024.95	ug/L	93
77) toluene	11.315	92	305372	50.22	ug/L	99
78) ethyl methacrylate	11.482	69	139962	51.79	ug/L	98
79) trans-1,3-dichloropropene	11.498	75	164217	51.23	ug/L	94
80) 1,1,2-trichloroethane	11.733	83	91499	50.50	ug/L	98
81) tetrachloroethene	11.890	164	117836	51.30	ug/L	96
82) 2-hexanone	11.895	58	155624	201.40	ug/L	99
83) 1,3-dichloropropane	11.921	76	163829	48.77	ug/L	98
84) butyl acetate	11.974	56	70061	48.67	ug/L	95
85) dibromochloromethane	12.183	129	132413	52.02	ug/L	97
86) 1,2-dibromoethane	12.350	107	119427	49.27	ug/L	99
87) n-butyl ether	12.810	57	603306	52.41	ug/L	99
88) chlorobenzene	12.863	112	339959	49.17	ug/L	100
89) 1,1,1,2-tetrachloroethane	12.936	131	157867	52.08	ug/L	100
90) ethylbenzene	12.926	91	602104	50.79	ug/L	98
91) m,p-xylene	13.056	106	472706	102.12	ug/L	99
92) o-xylene	13.496	91	544824	52.63	ug/L	100
93) styrene	13.506	104	395320	53.46	ug/L	93
94) butyl acrylate	13.302	55	235245	51.71	ug/L	98
95) isopropylbenzene	13.877	105	738258	54.59	ug/L	99
96) bromoform	13.762	173	97908	54.57	ug/L	98
97) cis-1,4-dichloro-2-butene	13.919	88	37697	51.39	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.186	83	173514	51.86	ug/L	99
101) trans-1,4-dichloro-2-b...	14.223	53	30059	60.07	ug/L	98
102) 1,2,3-trichloropropane	14.285	110	43000	51.95	ug/L	96
103) bromobenzene	14.306	156	181729	51.79	ug/L	98
104) n-propylbenzene	14.338	91	809618	53.56	ug/L	100
105) 2-chlorotoluene	14.484	126	177034	53.43	ug/L	97
106) 4-chlorotoluene	14.610	91	462056	52.60	ug/L	100
108) 1,3,5-trimethylbenzene	14.510	105	613544	54.17	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81666.d
 Acq On : 8 May 2018 8:01 pm
 Operator : HueanhT
 Sample : BS Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:34 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
109) tert-butylbenzene	14.887	119	539445	54.51	ug/L	99
110) 1,2,4-trimethylbenzene	14.944	105	624157	54.63	ug/L	99
111) sec-butylbenzene	15.133	105	877051	56.47	ug/L	99
112) p-isopropyltoluene	15.279	119	742491	56.01	ug/L	100
113) 1,3-dichlorobenzene	15.326	146	361064	50.96	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	356707	50.00	ug/L	99
115) 1,2-dichlorobenzene	15.844	146	391460	51.35	ug/L	99
116) benzyl chloride	15.530	91	303215	46.12	ug/L	100
118) n-butylbenzene	15.734	92	387267	56.38	ug/L	98
120) hexachloroethane	16.168	201	139154	55.07	ug/L	97
121) 1,2-dibromo-3-chloropr...	16.686	157	48664	51.18	ug/L	96
122) 1,3,5-trichlorobenzene	16.890	180	420895	51.45	ug/L	96
123) 1,2,4-trichlorobenzene	17.570	180	371840	52.37	ug/L	98
124) 2-ethylhexyl acrylate	17.575	70	26309	6.43	ug/L	91
125) hexachlorobutadiene	17.685	225	177196	51.86	ug/L	98
126) naphthalene	17.879	128	685260	48.80	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	345094	53.63	ug/L	99
128) 2-methylnaphthalene	19.165	142	139533	19.26	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\

Data File : 4b81666.d

Acq On : 8 May 2018 8:01 pm

Operator : HueanhT

Sample : BS

Inst : MS4B

Misc : MS26139,V4B3388,5,,,1

ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M

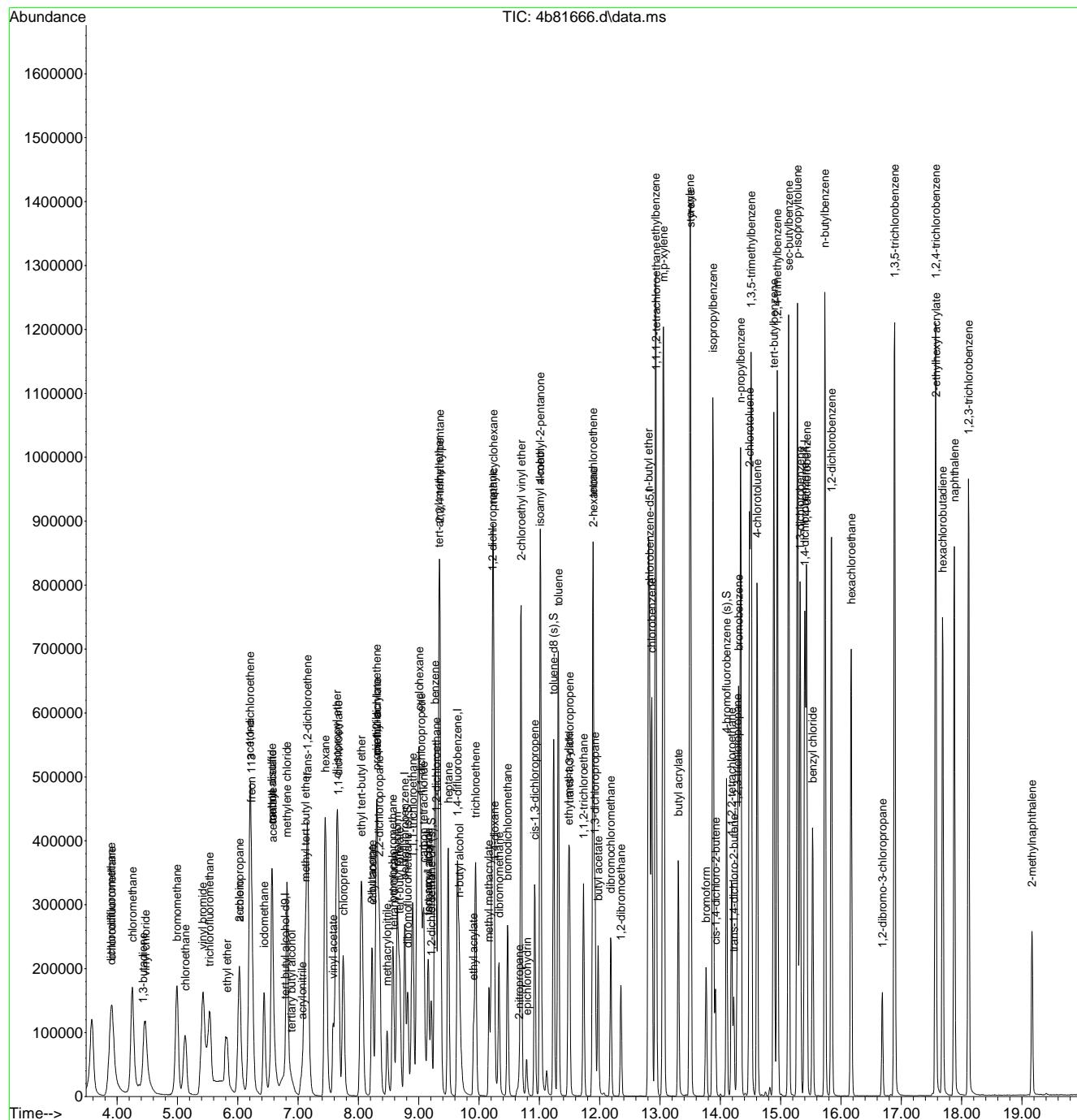
Quant Results File: M4B3370.RES

Quant Time: May 09 23:38:34 2018

Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um

QLast Update : Tue May 08 14:24:00 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50458.d
 Acq On : 9 May 2018 11:41 am
 Operator : JessicaP
 Sample : bs Inst : MS2V
 Misc : MS25969,V2V2014,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:51:13 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	267847	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	348705	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	503924	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	408872	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.328	152	192454	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	187246	53.34	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 106.68%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	205622	58.71	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 117.42%		
77) toluene-d8 (s)	4.956	98	561288	53.14	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 106.28%		
100) 4-bromofluorobenzene (s)	7.232	95	195489	49.94	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 99.88%		
Target Compounds						
2) ethanol	1.784	45	463700	5370.70	ug/L	98
3) tertiary butyl alcohol	2.314	59	216867	279.61	ug/L	97
4) 1,4-dioxane	4.280	88	86026	1175.11	ug/L	99
6) chlorodifluoromethane	1.139	51	230811	41.88	ug/L	99
7) dichlorodifluoromethane	1.129	85	196495	29.12	ug/L	100
10) chloromethane	1.239	50	324611	44.46	ug/L	98
11) vinyl chloride	1.302	62	286291	47.46	ug/L	99
12) bromomethane	1.485	94	137767	95.98	ug/L	98
13) chloroethane	1.553	64	113769	46.64	ug/L	97
14) trichlorofluoromethane	1.695	101	331947	44.05	ug/L	100
15) vinyl bromide	1.658	106	200705	49.98	ug/L	99
17) ethyl ether	1.852	74	110325	51.05	ug/L	94
18) 2-chloropropane	1.921	43	372970	58.71	ug/L	97
19) acrolein	1.931	56	65922	52.23	ug/L	99
20) freon 113	1.989	151	107620	41.02	ug/L	97
21) 1,1-dichloroethene	1.989	61	374767	55.40	ug/L	96
22) acetone	2.010	58	105105	203.90	ug/L #	84
23) acetonitrile	2.167	41	451426	548.64	ug/L	99
24) iodomethane	2.083	142	153527	56.75	ug/L	96
25) carbon disulfide	2.125	76	510271	48.97	ug/L	95
26) methylene chloride	2.272	84	221073	47.97	ug/L	90
27) methyl acetate	2.183	43	256705	56.65	ug/L	94
28) methyl tert butyl ether	2.424	73	654507	51.51	ug/L	96
29) trans-1,2-dichloroethene	2.429	96	203513	49.80	ug/L	95
30) hexane	2.592	56	99049	40.03	ug/L	92
31) di-isopropyl ether	2.696	45	766913	53.32	ug/L	97
32) ethyl tert-butyl ether	2.922	59	678854	50.80	ug/L	99
33) 1,1-dichloroethane	2.691	63	443028	51.84	ug/L	100
34) chloroprene	2.733	53	334575	54.41	ug/L	96
35) acrylonitrile	2.403	53	115473	53.12	ug/L	99
36) vinyl acetate	2.681	86	32229	48.83	ug/L #	91
37) ethyl acetate	3.043	45	55132	54.24	ug/L #	89
38) 2-butanone	3.022	72	129408	194.49	ug/L #	81
39) 2,2-dichloropropane	3.043	77	325530	55.00	ug/L	100
40) cis-1,2-dichloroethene	3.037	96	231096	49.21	ug/L	95
41) propionitrile	3.069	54	503435	490.12	ug/L	95
42) methyl acrylate	3.074	85	44300	49.75	ug/L	96
43) bromochloromethane	3.189	128	110980	53.10	ug/L	98
44) tetrahydrofuran	3.200	71	39755	49.35	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50458.d
 Acq On : 9 May 2018 11:41 am
 Operator : JessicaP
 Sample : bs Inst : MS2V
 Misc : MS25969,V2V2014,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:51:13 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
45) chloroform	3.247	83	434577	50.75	ug/L	99
47) methacrylonitrile	3.163	67	113541	50.35	ug/L	93
48) 1,1,1-trichloroethane	3.362	97	369881	53.11	ug/L	97
49) cyclohexane	3.410	84	213094	41.33	ug/L	98
50) 1,1-dichloropropene	3.462	75	318122	50.27	ug/L	98
51) carbon tetrachloride	3.462	119	289034	51.39	ug/L	100
52) isobutyl alcohol	3.504	43	159476	546.66	ug/L	98
53) tert-amyl alcohol	3.588	55	68595	251.08	ug/L	97
56) n-butyl alcohol	3.960	56	483537	2592.40	ug/L	96
57) benzene	3.598	78	848561	51.03	ug/L	99
58) tert-amyl methyl ether	3.672	73	614436	49.73	ug/L	99
59) iso-octane	3.672	57	385742	37.47	ug/L	93
60) heptane	3.782	57	77495	36.30	ug/L	96
61) isopropyl acetate	3.609	87	43849	51.70	ug/L	# 79
62) 1,2-dichloroethane	3.624	62	349997	54.96	ug/L	99
63) trichloroethylene	4.044	95	227393	50.36	ug/L	99
64) ethyl acrylate	4.091	55	339663	50.08	ug/L	99
65) 2-nitropropane	4.584	43	76998	57.96	ug/L	96
66) 2-chloroethyl vinyl ether	4.626	63	302055	121.20	ug/L	98
67) methyl methacrylate	4.259	69	167205	50.81	ug/L	95
68) 1,2-dichloropropane	4.233	63	233618	48.41	ug/L	98
69) methylcyclohexane	4.217	83	237516	40.19	ug/L	99
70) dibromomethane	4.290	93	169755	50.06	ug/L	97
71) bromodichloromethane	4.416	83	335959	53.39	ug/L	99
72) epichlorohydrin	4.663	57	139048	253.96	ug/L	98
73) cis-1,3-dichloropropene	4.747	75	370762	52.36	ug/L	96
74) 4-methyl-2-pentanone	4.862	58	451600	199.80	ug/L	97
75) 3-methyl-1-butanol	4.904	70	164674	1064.73	ug/L	98
78) toluene	5.014	92	485372	51.96	ug/L	98
79) ethyl methacrylate	5.239	69	317229	58.49	ug/L	95
80) trans-1,3-dichloropropene	5.192	75	360975	59.32	ug/L	97
81) 1,1,2-trichloroethane	5.355	83	202081	53.99	ug/L	100
82) 2-hexanone	5.533	58	515062	235.79	ug/L	# 87
83) tetrachloroethylene	5.428	164	159277	53.02	ug/L	97
84) 1,3-dichloropropane	5.491	76	343543	55.37	ug/L	99
85) butyl acetate	5.633	56	186598	57.05	ug/L	# 84
86) dibromochloromethane	5.664	129	259187	58.36	ug/L	99
87) 1,2-dibromoethane	5.764	107	256272	54.89	ug/L	100
88) n-butyl ether	6.293	57	972999	59.76	ug/L	99
89) chlorobenzene	6.188	112	520360	52.59	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	200462	56.92	ug/L	99
91) ethylbenzene	6.277	91	951518	55.52	ug/L	99
92) m,p-xylene	6.398	106	654047	106.63	ug/L	97
93) o-xylene	6.739	91	741121	55.69	ug/L	99
94) styrene	6.755	104	562749	56.89	ug/L	97
95) butyl acrylate	6.707	56	245663	63.05	ug/L	97
96) bromoform	6.912	173	177484	60.64	ug/L	99
97) isopropylbenzene	7.080	105	812050	53.91	ug/L	98
98) cis-1,4-dichloro-2-butene	7.137	88	114175	65.40	ug/L	96
101) bromobenzene	7.363	156	218513	53.28	ug/L	98
102) 1,1,2,2-tetrachloroethane	7.368	83	369853	56.13	ug/L	100
103) trans-1,4-dichloro-2-b...	7.405	53	92244	68.14	ug/L	91
104) 1,2,3-trichloropropane	7.415	110	74800	54.24	ug/L	99
105) n-propylbenzene	7.468	91	1053543	55.22	ug/L	100
106) 2-chlorotoluene	7.541	126	195651	53.41	ug/L	92
107) 4-chlorotoluene	7.662	126	196839	52.86	ug/L	98
109) 1,3,5-trimethylbenzene	7.641	105	666118	55.17	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50458.d
 Acq On : 9 May 2018 11:41 am
 Operator : JessicaP
 Sample : bs Inst : MS2V
 Misc : MS25969,V2V2014,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:51:13 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

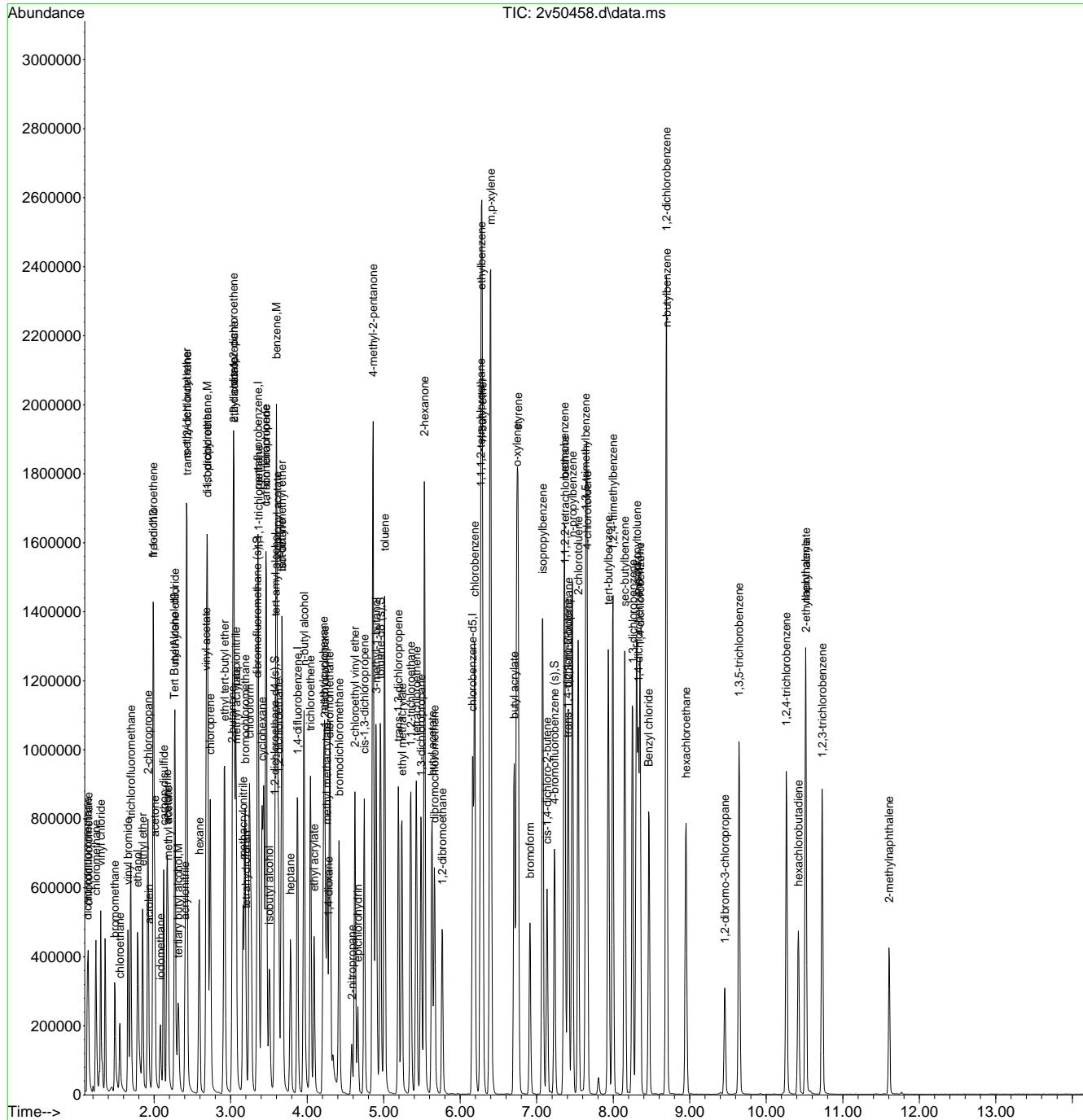
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	7.934	119	516185	53.43	ug/L	97
111) 1,2,4-trimethylbenzene	7.997	105	672556	50.40	ug/L	100
112) sec-butylbenzene	8.149	105	817196	54.97	ug/L	98
113) 1,3-dichlorobenzene	8.254	146	376463	53.80	ug/L	99
114) p-isopropyltoluene	8.307	119	640334	55.27	ug/L	99
115) 1,4-dichlorobenzene	8.354	146	382956	53.11	ug/L	100
116) 1,2-dichlorobenzene	8.694	146	379595	55.45	ug/L	98
118) n-butylbenzene	8.700	92	360052	57.95	ug/L	97
120) 1,2-dibromo-3-chloropr...	9.460	157	65054	60.43	ug/L	99
121) 1,3,5-trichlorobenzene	9.643	180	250465	55.42	ug/L	99
122) 1,2,4-trichlorobenzene	10.262	180	226587	56.30	ug/L	100
123) hexachlorobutadiene	10.419	225	77655	52.22	ug/L	95
124) naphthalene	10.514	128	724565	55.17	ug/L	100
125) 1,2,3-trichlorobenzene	10.734	180	216137	56.52	ug/L	97
126) hexachloroethane	8.951	201	104977	58.89	ug/L	98
127) Benzyl chloride	8.464	91	498981	60.99	ug/L	97
128) 2-ethylhexyl acrylate	10.519	70	30480	11.50	ug/L #	82
129) 2-methylnaphthalene	11.604	142	152140	29.65	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
Data File : 2v50458.d
Acq On : 9 May 2018 11:41 am
Operator : JessicaP
Sample : bs Inst : MS2V
Misc : MS25969,V2V2014,5,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
Quant Results File: M2V1992.RES
Quant Time: May 10 21:51:13 2018
Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
QLast Update : Mon Apr 23 10:50:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81670.d
 Acq On : 8 May 2018 9:53 pm
 Operator : HueanhT
 Sample : JC65632-13ms Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:38 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.796	65	131550	500.00	ug/L	0.02
5) pentafluorobenzene	8.768	168	235161	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	313781	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	315339	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.400	152	206261	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	112444	53.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 106.66%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	104655	51.34	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 102.68%		
76) toluene-d8 (s)	11.236	98	377942	49.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 98.94%		
99) 4-bromofluorobenzene (s)	14.102	95	151738	50.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 101.34%		
Target Compounds						
3) tertiary butyl alcohol	6.879	59	89321	259.43	ug/L	99
4) 1,4-dioxane	10.263	88	36931	1167.40	ug/L	92
6) chlorodifluoromethane	3.919	51	241132	41.09	ug/L	98
7) dichlorodifluoromethane	3.903	85	318939	52.65	ug/L	98
8) chloromethane	4.254	50	371363	50.49	ug/L	100
9) vinyl chloride	4.463	62	351798	50.93	ug/L	99
10) 1,3-butadiene	4.474	54	17737	4.51	ug/L #	71
11) bromomethane	4.991	94	236168	47.55	ug/L	99
12) chloroethane	5.127	64	185411	49.65	ug/L	99
13) trichlorofluoromethane	5.530	101	343438	52.52	ug/L	96
14) vinyl bromide	5.425	106	214195	48.14	ug/L	95
15) ethyl ether	5.807	74	66031	48.43	ug/L	96
16) 2-chloropropane	6.027	43	281971	52.62	ug/L	98
17) acrolein	6.032	56	27609	47.18	ug/L	94
18) freon 113	6.231	151	162341	54.83	ug/L	97
19) 1,1-dichloroethene	6.205	61	266169	54.42	ug/L	98
20) acetone	6.205	58	43319	197.31	ug/L	87
21) acetonitrile	6.571	41	208270	462.45	ug/L	98
22) iodomethane	6.440	142	277747	50.41	ug/L	100
23) carbon disulfide	6.571	76	523940	49.84	ug/L	100
24) methylene chloride	6.817	84	177681	49.66	ug/L	99
25) methyl acetate	6.571	43	75114	40.61	ug/L	96
26) methyl tert butyl ether	7.120	73	433412	47.44	ug/L	98
27) trans-1,2-dichloroethene	7.162	61	217684	50.62	ug/L	98
28) hexane	7.450	56	91766	47.79	ug/L	96
29) di-isopropyl ether	7.638	45	521447	49.42	ug/L	99
30) 2-butanone	8.224	72	42084	201.32	ug/L	97
31) 1,1-dichloroethane	7.664	63	263786	51.28	ug/L	99
32) chloroprene	7.748	53	190274	53.18	ug/L	97
33) acrylonitrile	7.063	53	47199	48.78	ug/L	93
34) vinyl acetate	7.580	86	12108	37.02	ug/L #	93
35) ethyl tert-butyl ether	8.051	59	471351	48.36	ug/L	99
36) ethyl acetate	8.229	45	12765	42.11	ug/L	96
37) 2,2-dichloropropane	8.344	77	250809	49.18	ug/L	98
38) cis-1,2-dichloroethene	8.302	96	152845	50.20	ug/L	98
39) propionitrile	8.297	54	175026	482.25	ug/L	97
40) methyl acrylate	8.313	85	13825	49.02	ug/L	98
41) methacrylonitrile	8.480	67	38800	48.60	ug/L	99
42) bromochloromethane	8.574	128	72748	50.33	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81670.d
 Acq On : 8 May 2018 9:53 pm
 Operator : HueanhT
 Sample : JC65632-13ms Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:38 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	8.585	72	13764	49.02	ug/L	91
44) chloroform	8.642	83	238068	50.77	ug/L	99
47) 1,1,1-trichloroethane	8.898	97	278126	54.86	ug/L	98
48) cyclohexane	9.003	84	269478	50.53	ug/L	95
50) 1,1-dichloropropene	9.040	75	161615	53.03	ug/L	99
51) carbon tetrachloride	9.076	117	236184	55.09	ug/L	99
52) tert-amyl alcohol	9.149	73	33912	230.21	ug/L	93
53) isopropyl acetate	9.160	87	18986	44.20	ug/L	95
56) n-butyl alcohol	9.672	56	191329	2423.60	ug/L	96
57) 2,2,4-trimethylpentane	9.348	57	545936	46.57	ug/L	98
58) benzene	9.270	78	499457	49.62	ug/L	98
59) tert-amyl methyl ether	9.338	73	415287	46.29	ug/L	97
60) heptane	9.489	57	91051	45.79	ug/L	95
61) 1,2-dichloroethane	9.291	62	139789	47.23	ug/L	97
62) ethyl acrylate	9.913	55	111459	47.64	ug/L	100
63) trichloroethylene	9.944	95	124743	51.85	ug/L	96
65) methyl methacrylate	10.169	100	24035	45.49	ug/L	94
66) methylcyclohexane	10.237	83	302434	51.32	ug/L	98
67) 1,2-dichloropropane	10.222	63	131326	49.37	ug/L	96
68) dibromomethane	10.331	93	72288	49.03	ug/L	97
69) bromodichloromethane	10.473	83	167314	50.73	ug/L	98
70) 2-nitropropane	10.666	41	22623	30.68	ug/L	94
71) epichlorohydrin	10.786	57	16142	74.32	ug/L	97
72) cis-1,3-dichloropropene	10.922	75	184179	48.68	ug/L	98
73) 4-methyl-2-pentanone	11.017	58	183093	199.58	ug/L	93
74) isoamyl alcohol	11.011	70	80034	1065.36	ug/L	98
77) toluene	11.315	92	302744	49.14	ug/L	97
78) ethyl methacrylate	11.482	69	133605	48.79	ug/L	98
79) trans-1,3-dichloropropene	11.498	75	157682	48.55	ug/L	94
80) 1,1,2-trichloroethane	11.733	83	87408	47.61	ug/L	96
81) tetrachloroethene	11.890	164	121693	52.29	ug/L	98
82) 2-hexanone	11.895	58	153747	196.36	ug/L	99
83) 1,3-dichloropropane	11.921	76	157807	46.36	ug/L	99
84) butyl acetate	11.974	56	61868	42.41	ug/L	100
85) dibromochloromethane	12.183	129	126392	49.00	ug/L	98
86) 1,2-dibromoethane	12.355	107	113479	46.20	ug/L	96
87) n-butyl ether	12.811	57	586714	50.30	ug/L	99
88) chlorobenzene	12.863	112	332910	47.52	ug/L	99
89) 1,1,1,2-tetrachloroethane	12.936	131	151338	49.27	ug/L	99
90) ethylbenzene	12.926	91	594124	49.46	ug/L	100
91) m,p-xylene	13.056	106	462419	98.59	ug/L	99
92) o-xylene	13.496	91	532480	50.76	ug/L	98
93) styrene	13.506	104	369205	49.28	ug/L	93
94) butyl acrylate	13.302	55	233565	50.67	ug/L	99
95) isopropylbenzene	13.878	105	722140	52.70	ug/L	100
96) bromoform	13.762	173	89922	49.46	ug/L	96
97) cis-1,4-dichloro-2-butene	13.919	88	34783	47.13	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.186	83	163780	48.05	ug/L	100
101) trans-1,4-dichloro-2-b...	14.223	53	28044	55.01	ug/L	96
102) 1,2,3-trichloropropane	14.285	110	39221	46.51	ug/L	96
103) bromobenzene	14.306	156	174443	48.80	ug/L	100
104) n-propylbenzene	14.338	91	794497	51.59	ug/L	99
105) 2-chlorotoluene	14.484	126	171507	50.81	ug/L	98
106) 4-chlorotoluene	14.610	91	445016	49.73	ug/L	100
108) 1,3,5-trimethylbenzene	14.510	105	590010	51.13	ug/L	100
109) tert-butylbenzene	14.887	119	527101	52.27	ug/L	99
110) 1,2,4-trimethylbenzene	14.944	105	593626	51.00	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81670.d
 Acq On : 8 May 2018 9:53 pm
 Operator : HueanhT
 Sample : JC65632-13ms Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:38 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

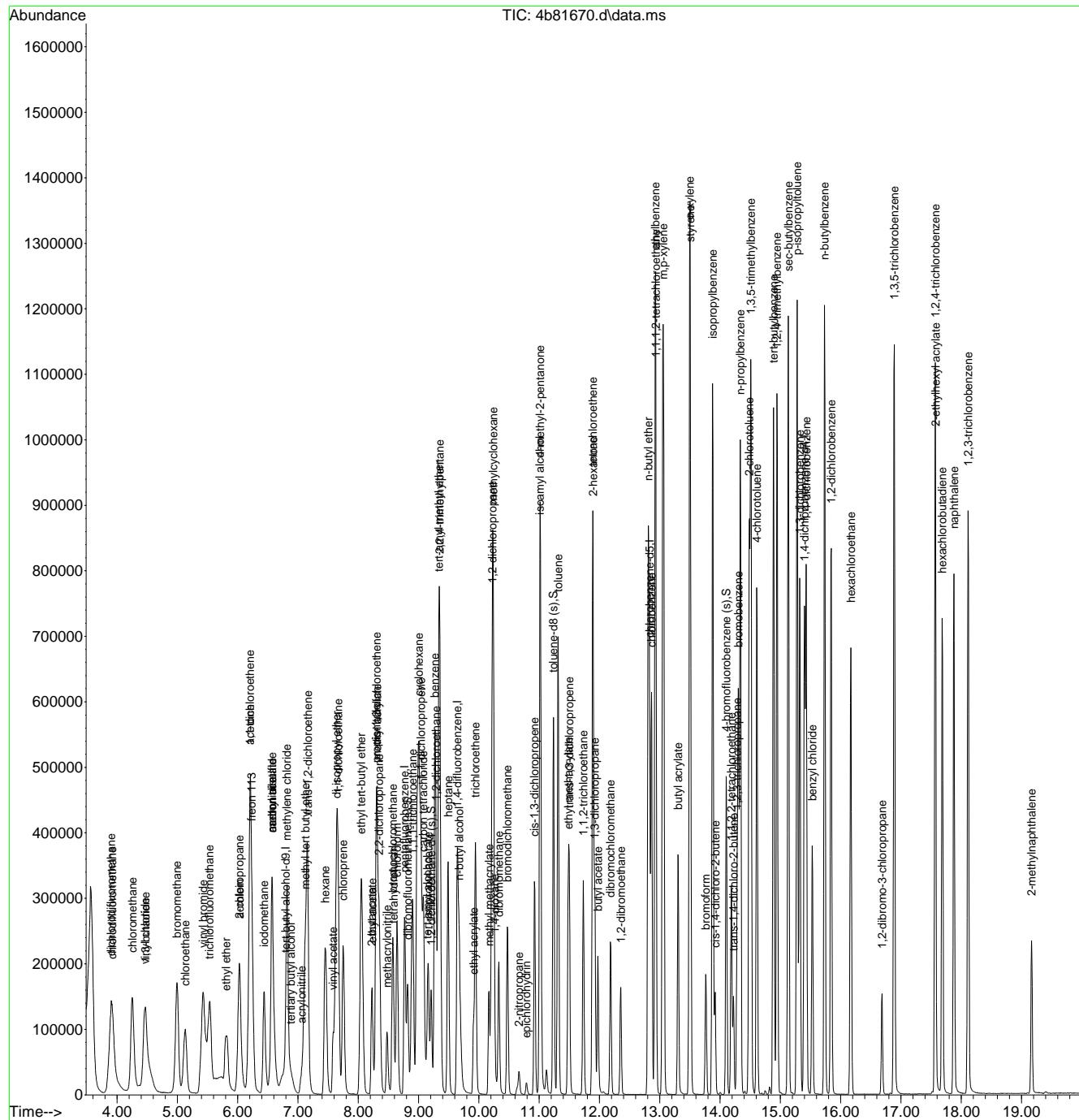
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
111) sec-butylbenzene	15.133	105	855277	54.05	ug/L	99
112) p-isopropyltoluene	15.279	119	718089	53.17	ug/L	100
113) 1,3-dichlorobenzene	15.321	146	350021	48.49	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	346299	47.64	ug/L	99
115) 1,2-dichlorobenzene	15.844	146	373119	48.04	ug/L	99
116) benzyl chloride	15.530	91	274783	41.03	ug/L	98
118) n-butylbenzene	15.734	92	372797	53.27	ug/L	98
120) hexachloroethane	16.168	201	135039	52.46	ug/L	98
121) 1,2-dibromo-3-chloropr...	16.686	157	45360	46.83	ug/L	98
122) 1,3,5-trichlorobenzene	16.890	180	396758	47.60	ug/L	98
123) 1,2,4-trichlorobenzene	17.570	180	348084	48.12	ug/L	99
124) 2-ethylhexyl acrylate	17.575	70	22677	5.54	ug/L	87
125) hexachlorobutadiene	17.685	225	169595	48.72	ug/L	97
126) naphthalene	17.879	128	635207	44.40	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	317942	48.50	ug/L	97
128) 2-methylnaphthalene	19.165	142	124950	16.93	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81670.d
 Acq On : 8 May 2018 9:53 pm
 Operator : HueanhT
 Sample : JC65632-13ms
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 7 Sample Multiplier: 1
 Inst : MS4B

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:42:38 2018
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81671.d
 Acq On : 8 May 2018 10:21 pm
 Operator : HueanhT
 Sample : JC65632-13msd Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:09 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.775	65	140911	500.00	ug/L	0.00
5) pentafluorobenzene	8.768	168	237798	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	318433	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	314072	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	199685	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	112269	52.66	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 105.32%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	105003	50.76	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 101.52%		
76) toluene-d8 (s)	11.236	98	380548	50.02	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.04%		
99) 4-bromofluorobenzene (s)	14.102	95	150715	51.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 103.98%		
Target Compounds						
3) tertiary butyl alcohol	6.885	59	96965	262.92	ug/L	97
4) 1,4-dioxane	10.263	88	42306	1248.47	ug/L	96
6) chlorodifluoromethane	3.914	51	249806	42.10	ug/L	99
7) dichlorodifluoromethane	3.898	85	324278	52.93	ug/L	95
8) chloromethane	4.249	50	381469	51.29	ug/L	98
9) vinyl chloride	4.463	62	364922	52.24	ug/L	99
10) 1,3-butadiene	4.468	54	27388	6.88	ug/L	# 81
11) bromomethane	4.997	94	236286	47.04	ug/L	99
12) chloroethane	5.127	64	188281	49.86	ug/L	98
13) trichlorofluoromethane	5.535	101	340483	51.49	ug/L	98
14) vinyl bromide	5.425	106	221446	49.22	ug/L	97
15) ethyl ether	5.823	74	69003	50.05	ug/L	97
16) 2-chloropropane	6.027	43	279964	51.67	ug/L	98
17) acrolein	6.032	56	26895	45.45	ug/L	97
18) freon 113	6.226	151	165108	55.14	ug/L	95
19) 1,1-dichloroethene	6.205	61	262301	53.04	ug/L	98
20) acetone	6.194	58	44693	201.31	ug/L	87
21) acetonitrile	6.571	41	217537	477.67	ug/L	97
22) iodomethane	6.435	142	280278	50.31	ug/L	99
23) carbon disulfide	6.566	76	521867	49.09	ug/L	99
24) methylene chloride	6.817	84	175084	48.39	ug/L	99
25) methyl acetate	6.571	43	78700	42.07	ug/L	99
26) methyl tert butyl ether	7.120	73	440843	47.72	ug/L	99
27) trans-1,2-dichloroethene	7.157	61	219284	50.43	ug/L	98
28) hexane	7.455	56	93877	48.35	ug/L	96
29) di-isopropyl ether	7.633	45	525056	49.21	ug/L	98
30) 2-butanone	8.224	72	43034	203.58	ug/L	# 88
31) 1,1-dichloroethane	7.664	63	265228	50.99	ug/L	99
32) chloroprene	7.753	53	192319	53.16	ug/L	97
33) acrylonitrile	7.062	53	47700	48.75	ug/L	94
34) vinyl acetate	7.580	86	14407	43.56	ug/L	97
35) ethyl tert-butyl ether	8.051	59	481949	48.90	ug/L	99
36) ethyl acetate	8.229	45	13205	43.08	ug/L	# 80
37) 2,2-dichloropropane	8.344	77	252506	48.97	ug/L	99
38) cis-1,2-dichloroethene	8.302	96	155257	50.42	ug/L	98
39) propionitrile	8.297	54	179225	488.34	ug/L	98
40) methyl acrylate	8.312	85	14172	49.70	ug/L	100
41) methacrylonitrile	8.480	67	39083	48.41	ug/L	97
42) bromochloromethane	8.574	128	72422	49.55	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81671.d
 Acq On : 8 May 2018 10:21 pm
 Operator : HueanhT
 Sample : JC65632-13msd Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:09 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
43) tetrahydrofuran	8.584	72	14638	51.55	ug/L	95
44) chloroform	8.642	83	240953	50.81	ug/L	98
47) 1,1,1-trichloroethane	8.898	97	281407	54.89	ug/L	98
48) cyclohexane	9.003	84	269607	50.00	ug/L	92
50) 1,1-dichloropropene	9.039	75	163616	53.09	ug/L	100
51) carbon tetrachloride	9.081	117	237775	54.85	ug/L	97
52) tert-amyl alcohol	9.144	73	36831	247.25	ug/L #	84
53) isopropyl acetate	9.155	87	19558	45.03	ug/L	94
56) n-butyl alcohol	9.672	56	210863	2632.02	ug/L	96
57) 2,2,4-trimethylpentane	9.348	57	554025	46.57	ug/L	98
58) benzene	9.270	78	508431	49.77	ug/L	99
59) tert-amyl methyl ether	9.332	73	421344	46.28	ug/L	98
60) heptane	9.489	57	93149	46.16	ug/L	96
61) 1,2-dichloroethane	9.291	62	142524	47.45	ug/L	99
62) ethyl acrylate	9.913	55	115391	48.60	ug/L	99
63) trichloroethylene	9.944	95	127072	52.04	ug/L	99
65) methyl methacrylate	10.164	100	25225	47.04	ug/L	89
66) methylcyclohexane	10.237	83	304593	50.93	ug/L	98
67) 1,2-dichloropropane	10.222	63	132735	49.17	ug/L	99
68) dibromomethane	10.331	93	74495	49.79	ug/L	99
69) bromodichloromethane	10.473	83	169141	50.53	ug/L	98
70) 2-nitropropane	10.666	41	22797	30.47	ug/L	92
71) epichlorohydrin	10.792	57	14836	67.31	ug/L	99
72) cis-1,3-dichloropropene	10.922	75	189198	49.27	ug/L	98
73) 4-methyl-2-pentanone	11.017	58	188955	202.96	ug/L	91
74) isoamyl alcohol	11.017	70	88747	1164.08	ug/L	96
77) toluene	11.315	92	307019	50.03	ug/L	99
78) ethyl methacrylate	11.482	69	136283	49.96	ug/L	97
79) trans-1,3-dichloropropene	11.498	75	160849	49.72	ug/L	96
80) 1,1,2-trichloroethane	11.733	83	89174	48.77	ug/L	96
81) tetrachloroethene	11.890	164	121281	52.32	ug/L	99
82) 2-hexanone	11.895	58	159850	204.98	ug/L	99
83) 1,3-dichloropropane	11.921	76	158973	46.89	ug/L	94
84) butyl acetate	11.974	56	62156	42.78	ug/L	97
85) dibromochloromethane	12.183	129	125755	48.95	ug/L	99
86) 1,2-dibromoethane	12.350	107	114823	46.94	ug/L	98
87) n-butyl ether	12.810	57	589934	50.78	ug/L	100
88) chlorobenzene	12.863	112	336142	48.18	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.936	131	153443	50.16	ug/L	100
90) ethylbenzene	12.926	91	594277	49.67	ug/L	100
91) m,p-xylene	13.056	106	464526	99.44	ug/L	100
92) o-xylene	13.496	91	529584	50.69	ug/L	99
93) styrene	13.506	104	372703	49.94	ug/L	92
94) butyl acrylate	13.302	55	233949	50.96	ug/L	98
95) isopropylbenzene	13.877	105	721569	52.87	ug/L	99
96) bromoform	13.762	173	91015	50.26	ug/L	99
97) cis-1,4-dichloro-2-butene	13.919	88	35254	47.90	ug/L	99
100) 1,1,2,2-tetrachloroethane	14.186	83	163102	49.43	ug/L	99
101) trans-1,4-dichloro-2-b...	14.223	53	27994	56.72	ug/L	98
102) 1,2,3-trichloropropane	14.285	110	40256	49.31	ug/L	93
103) bromobenzene	14.306	156	173215	50.05	ug/L	97
104) n-propylbenzene	14.338	91	788571	52.89	ug/L	100
105) 2-chlorotoluene	14.484	126	170357	52.13	ug/L	99
106) 4-chlorotoluene	14.610	91	438899	50.66	ug/L	99
108) 1,3,5-trimethylbenzene	14.510	105	591919	52.99	ug/L	100
109) tert-butylbenzene	14.887	119	534805	54.79	ug/L	100
110) 1,2,4-trimethylbenzene	14.944	105	595598	52.85	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81671.d
 Acq On : 8 May 2018 10:21 pm
 Operator : HueanhT
 Sample : JC65632-13msd Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:09 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

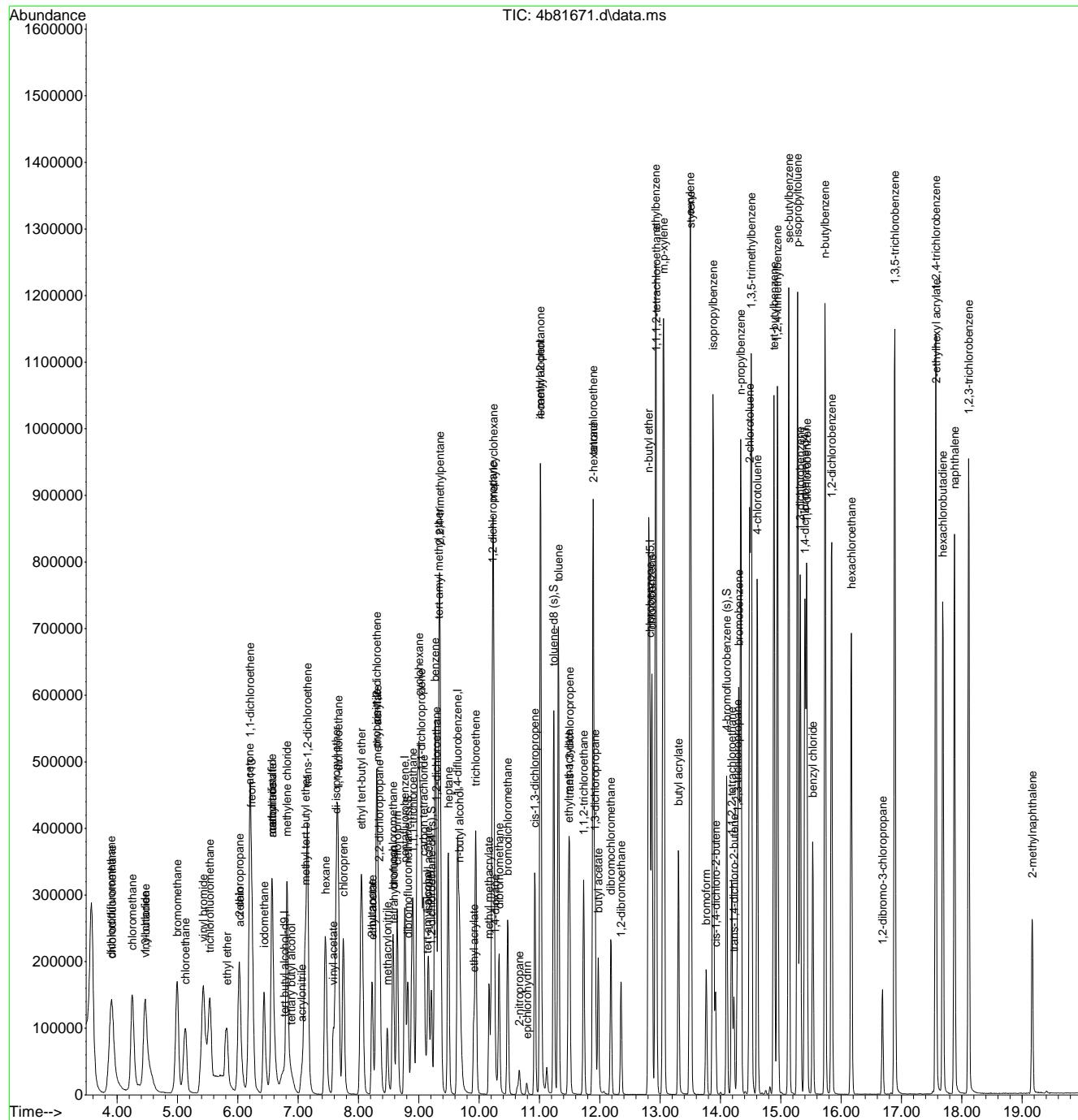
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
111) sec-butylbenzene	15.133	105	860122	56.14	ug/L	99
112) p-isopropyltoluene	15.279	119	720017	55.06	ug/L	99
113) 1,3-dichlorobenzene	15.321	146	344738	49.33	ug/L	99
114) 1,4-dichlorobenzene	15.431	146	341761	48.57	ug/L	100
115) 1,2-dichlorobenzene	15.844	146	371831	49.45	ug/L	99
116) benzyl chloride	15.530	91	269195	41.52	ug/L	97
118) n-butylbenzene	15.734	92	369472	54.54	ug/L	99
120) hexachloroethane	16.168	201	139371	55.92	ug/L	99
121) 1,2-dibromo-3-chloropr...	16.686	157	45896	48.94	ug/L	97
122) 1,3,5-trichlorobenzene	16.890	180	400060	49.58	ug/L	97
123) 1,2,4-trichlorobenzene	17.570	180	354930	50.69	ug/L	99
124) 2-ethylhexyl acrylate	17.575	70	26037	6.45	ug/L	95
125) hexachlorobutadiene	17.685	225	172824	51.28	ug/L	99
126) naphthalene	17.879	128	674111	48.67	ug/L	100
127) 1,2,3-trichlorobenzene	18.114	180	329759	51.96	ug/L	98
128) 2-methylnaphthalene	19.170	142	145396	20.35	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81671.d
 Acq On : 8 May 2018 10:21 pm
 Operator : HueanhT
 Sample : JC65632-13msd
 Inst : MS4B
 Misc : MS26139,V4B3388,,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:43:09 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\marianng\05-14-18\v2v2015\
 Data File : 2v50481.d
 Acq On : 10 May 2018 8:43 am
 Operator : JessicaP
 Sample : JC65719-5ms Inst : MS2V
 Misc : MS26169,V2V2014,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 14 03:11:43 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	269010	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	351109	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	499675	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	413522	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.328	152	197883	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	189585	53.64	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 107.28%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	210622	60.65	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 121.30%		
77) toluene-d8 (s)	4.956	98	546029	51.11	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 102.22%		
100) 4-bromofluorobenzene (s)	7.232	95	202430	50.29	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 100.58%		
Target Compounds						
2) ethanol	1.784	45	420967	4854.68	ug/L	97
3) tertiary butyl alcohol	2.314	59	203933	261.80	ug/L	96
4) 1,4-dioxane	4.280	88	84438	1148.43	ug/L	100
6) chlorodifluoromethane	1.139	51	271743	48.97	ug/L	98
7) dichlorodifluoromethane	1.129	85	415448	61.15	ug/L	100
10) chloromethane	1.239	50	412651	56.13	ug/L	99
11) vinyl chloride	1.302	62	356175	58.64	ug/L	99
12) bromomethane	1.485	94	139189	97.05	ug/L	99
13) chloroethane	1.554	64	133757	54.46	ug/L	96
14) trichlorofluoromethane	1.695	101	395205	52.08	ug/L	99
15) vinyl bromide	1.658	106	197068	48.74	ug/L	97
17) ethyl ether	1.852	74	99753	45.84	ug/L	87
18) 2-chloropropane	1.921	43	376738	58.90	ug/L	97
19) acrolein	1.931	56	55900	43.98	ug/L	98
20) freon 113	1.989	151	138201	52.32	ug/L	96
21) 1,1-dichloroethene	1.989	61	383114	56.25	ug/L	95
22) acetone	2.010	58	95466	183.93	ug/L #	77
23) acetonitrile	2.167	41	421542	508.81	ug/L	98
24) iodomethane	2.083	142	146211	53.99	ug/L	92
25) carbon disulfide	2.125	76	535201	51.01	ug/L	95
26) methylene chloride	2.272	84	202321	43.60	ug/L	86
27) methyl acetate	2.183	43	235280	51.56	ug/L	93
28) methyl tert butyl ether	2.424	73	592621	46.32	ug/L	93
29) trans-1,2-dichloroethene	2.429	96	191010	46.42	ug/L	93
30) hexane	2.592	56	155690	62.49	ug/L	96
31) di-isopropyl ether	2.697	45	776848	53.64	ug/L	98
32) ethyl tert-butyl ether	2.917	59	645960	48.01	ug/L	96
33) 1,1-dichloroethane	2.691	63	434183	50.46	ug/L	99
34) chloroprene	2.733	53	344721	55.67	ug/L	92
35) acrylonitrile	2.403	53	105344	48.13	ug/L	95
36) vinyl acetate	2.681	86	29845	44.91	ug/L #	53
37) ethyl acetate	3.043	45	54254	53.01	ug/L	96
38) 2-butanone	3.027	72	122167	182.35	ug/L #	65
39) 2,2-dichloropropane	3.048	77	343134	57.58	ug/L	98
40) cis-1,2-dichloroethene	3.037	96	216375	45.76	ug/L	89
41) propionitrile	3.069	54	496177	479.75	ug/L	92
42) methyl acrylate	3.074	85	40320	44.97	ug/L #	83
43) bromochloromethane	3.189	128	106089	50.42	ug/L	96
44) tetrahydrofuran	3.200	71	35567	43.85	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\marianng\05-14-18\v2v2015\
 Data File : 2v50481.d
 Acq On : 10 May 2018 8:43 am
 Operator : JessicaP
 Sample : JC65719-5ms Inst : MS2V
 Misc : MS26169,V2V2014,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 14 03:11:43 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
45) chloroform	3.247	83	416383	48.30	ug/L	98
47) methacrylonitrile	3.163	67	106649	46.97	ug/L	92
48) 1,1,1-trichloroethane	3.362	97	368193	52.50	ug/L	97
49) cyclohexane	3.410	84	241859	46.59	ug/L	97
50) 1,1-dichloropropene	3.462	75	318831	50.04	ug/L	99
51) carbon tetrachloride	3.462	119	314141	55.47	ug/L	99
52) isobutyl alcohol	3.504	43	145011	493.67	ug/L	98
53) tert-amyl alcohol	3.588	55	63625	231.30	ug/L	93
56) n-butyl alcohol	3.960	56	465045	2514.46	ug/L	95
57) benzene	3.598	78	808430	49.03	ug/L	99
58) tert-amyl methyl ether	3.672	73	597269	48.75	ug/L	98
59) iso-octane	3.672	57	603085	59.07	ug/L	98
60) heptane	3.782	57	133153	62.90	ug/L	95
61) isopropyl acetate	3.609	87	40349	47.97	ug/L	# 87
62) 1,2-dichloroethane	3.625	62	330895	52.40	ug/L	98
63) trichloroethylene	4.044	95	228020	50.92	ug/L	99
64) ethyl acrylate	4.091	55	348163	51.77	ug/L	99
65) 2-nitropropane	4.584	43	80729	61.28	ug/L	99
66) 2-chloroethyl vinyl ether	4.663	63	5447	2.20	ug/L	67
67) methyl methacrylate	4.259	69	168351	51.59	ug/L	90
68) 1,2-dichloropropane	4.233	63	239005	49.95	ug/L	98
69) methylcyclohexane	4.217	83	328564	56.06	ug/L	96
70) dibromomethane	4.290	93	169461	50.40	ug/L	94
71) bromodichloromethane	4.416	83	331651	53.15	ug/L	100
72) epichlorohydrin	4.663	57	127549	234.94	ug/L	97
73) cis-1,3-dichloropropene	4.747	75	323747	46.11	ug/L	95
74) 4-methyl-2-pentanone	4.862	58	373589	166.69	ug/L	95
75) 3-methyl-1-butanol	4.904	70	138893	905.68	ug/L	98
78) toluene	5.014	92	439810	46.55	ug/L	97
79) ethyl methacrylate	5.234	69	297111	54.17	ug/L	92
80) trans-1,3-dichloropropene	5.192	75	347269	56.42	ug/L	97
81) 1,1,2-trichloroethane	5.355	83	189594	50.09	ug/L	99
82) 2-hexanone	5.533	58	480616	217.55	ug/L	# 87
83) tetrachloroethylene	5.428	164	156685	51.57	ug/L	96
84) 1,3-dichloropropane	5.491	76	320376	51.06	ug/L	98
85) butyl acetate	5.633	56	175495	53.06	ug/L	# 83
86) dibromochloromethane	5.664	129	238872	53.18	ug/L	99
87) 1,2-dibromoethane	5.764	107	235778	49.93	ug/L	97
88) n-butyl ether	6.293	57	924205	56.13	ug/L	98
89) chlorobenzene	6.188	112	483975	48.36	ug/L	95
90) 1,1,1,2-tetrachloroethane	6.267	131	185015	51.94	ug/L	99
91) ethylbenzene	6.278	91	979807	56.53	ug/L	98
92) m,p-xylene	6.398	106	666358	107.41	ug/L	97
93) o-xylene	6.739	91	698932	51.93	ug/L	99
94) styrene	6.755	104	525241	52.50	ug/L	94
95) butyl acrylate	6.707	56	233470	59.25	ug/L	96
96) bromoform	6.912	173	163023	55.08	ug/L	100
97) isopropylbenzene	7.080	105	798209	52.39	ug/L	98
98) cis-1,4-dichloro-2-butene	7.137	88	99219	56.19	ug/L	96
101) bromobenzene	7.358	156	204096	48.40	ug/L	90
102) 1,1,2,2-tetrachloroethane	7.368	83	339467	50.11	ug/L	100
103) trans-1,4-dichloro-2-b...	7.405	53	78366	56.30	ug/L	94
104) 1,2,3-trichloropropene	7.415	110	69272	48.86	ug/L	94
105) n-propylbenzene	7.468	91	1033937	52.71	ug/L	100
106) 2-chlorotoluene	7.541	126	187369	49.75	ug/L	95
107) 4-chlorotoluene	7.662	126	187957	49.09	ug/L	98
109) 1,3,5-trimethylbenzene	7.641	105	652116	52.53	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\marianng\05-14-18\v2v2015\
 Data File : 2v50481.d
 Acq On : 10 May 2018 8:43 am
 Operator : JessicaP
 Sample : JC65719-5ms Inst : MS2V
 Misc : MS26169,V2V2014,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 14 03:11:43 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

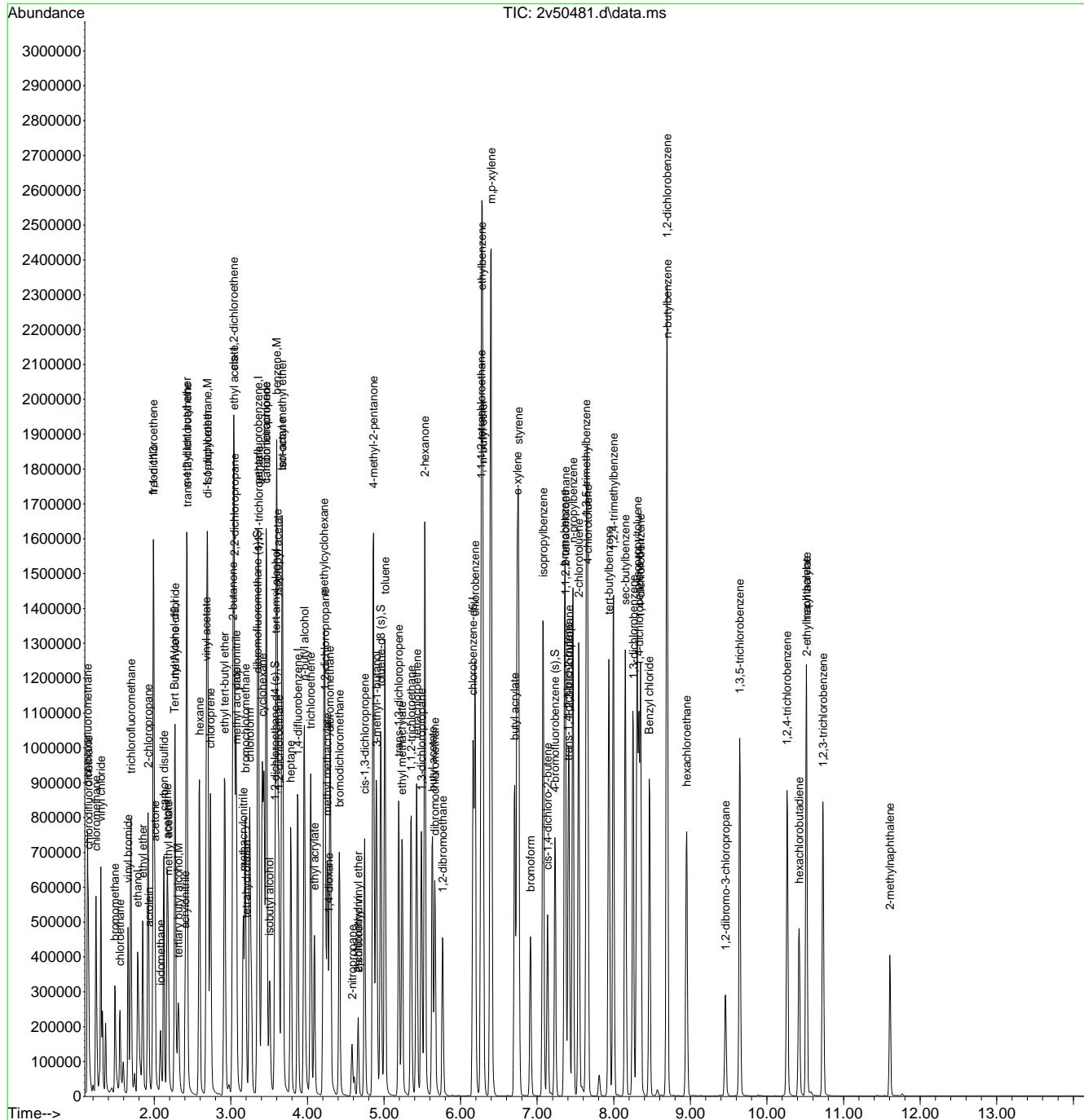
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	7.934	119	503842	50.72	ug/L	97
111) 1,2,4-trimethylbenzene	7.997	105	672171	48.99	ug/L	99
112) sec-butylbenzene	8.149	105	805558	52.70	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	355667	49.43	ug/L	98
114) p-isopropyltoluene	8.307	119	621637	52.18	ug/L	99
115) 1,4-dichlorobenzene	8.349	146	368572	49.71	ug/L	98
116) 1,2-dichlorobenzene	8.695	146	358915	50.99	ug/L	100
118) n-butylbenzene	8.700	92	360371	56.41	ug/L	97
120) 1,2-dibromo-3-chloropr...	9.460	157	59142	53.43	ug/L	93
121) 1,3,5-trichlorobenzene	9.644	180	241631	52.00	ug/L	99
122) 1,2,4-trichlorobenzene	10.262	180	216934	52.42	ug/L	99
123) hexachlorobutadiene	10.420	225	78225	51.16	ug/L	99
124) naphthalene	10.514	128	696105	51.54	ug/L	99
125) 1,2,3-trichlorobenzene	10.734	180	206424	52.50	ug/L	98
126) hexachloroethane	8.951	201	97710	53.31	ug/L	96
127) Benzyl chloride	8.464	91	545334	64.83	ug/L	97
128) 2-ethylhexyl acrylate	10.519	70	30445	11.17	ug/L	92
129) 2-methylnaphthalene	11.604	142	142576	27.02	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\mariannng\05-14-18\v2v2015\
Data File : 2v50481.d
Acq On : 10 May 2018 8:43 am
Operator : JessicaP
Sample : JC65719-5ms Inst : MS2V
Misc : MS26169,V2V2014,5,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
Quant Results File: M2V1992.RES
Quant Time: May 14 03:11:43 2018
Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um
QLast Update : Mon Apr 23 10:38:21 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.812	65	252948	500.00	ug/L	0.00
5) pentafluorobenzene	10.171	168	182681	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.112	114	274352	50.00	ug/L	0.00
76) chlorobenzene-d5	14.512	117	250052	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.116	152	143599	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	91040	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.00%		
55) 1,2-dichloroethane-d4 (s)	10.631	65	92269	47.21	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	= 94.42%		
77) toluene-d8 (s)	12.854	98	313910	46.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 93.96%		
101) 4-bromofluorobenzene (s)	15.804	95	112364	48.04	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 96.08%		
Target Compounds						
3) tertiary butyl alcohol	7.932	59	112380	250.75	ug/L	98
4) 1,4-dioxane	11.850	88	34265	1215.57	ug/L	94
6) chlorodifluoromethane	4.193	51	100336	35.64	ug/L	93
7) dichlorodifluoromethane	4.193	85	198978	64.55	ug/L	97
10) chloromethane	4.538	50	182515	51.91	ug/L	99
11) vinyl chloride	4.836	62	207260	57.24	ug/L	99
13) bromomethane	5.521	94	113983	55.92	ug/L	99
14) chloroethane	5.715	64	93080	57.70	ug/L	94
15) vinyl bromide	6.091	106	170125	91.95	ug/L	98
16) trichlorofluoromethane	6.243	101	169278	58.75	ug/L	97
17) ethyl ether	6.661	74	41891	44.52	ug/L	86
18) acrolein	6.902	56	16968	31.04	ug/L	96
19) freon 113	7.111	151	88242	61.64	ug/L	99
20) 1,1-dichloroethene	7.101	96	81467	48.08	ug/L	94
21) acetone	7.137	58	41276	151.41	ug/L	95
22) acetonitrile	7.597	41	171596	392.77	ug/L	97
23) iodomethane	7.383	142	132100	38.64	ug/L	99
24) carbon disulfide	7.519	76	270690	41.37	ug/L	97
25) methylene chloride	7.843	84	87548	44.79	ug/L	92
26) methyl acetate	7.650	43	71093	35.13	ug/L	95
27) methyl tert butyl ether	8.241	73	285215	48.69	ug/L	97
28) trans-1,2-dichloroethene	8.256	96	79960	47.11	ug/L	92
29) hexane	8.617	57	105959	43.48	ug/L	96
30) di-isopropyl ether	8.874	45	255224	39.28	ug/L	80
31) ethyl tert-butyl ether	9.360	59	267535	45.50	ug/L	97
32) 2-butanone	9.580	72	49923	171.20	ug/L #	71
33) 1,1-dichloroethane	8.847	63	140804	42.08	ug/L	100
34) chloroprene	8.973	53	111064	43.28	ug/L	95
35) acrylonitrile	8.183	53	38920	38.91	ug/L	97
36) vinyl acetate	8.847	86	14508	42.92	ug/L #	60
37) ethyl acetate	9.611	45	13510	36.66	ug/L #	78
38) 2,2-dichloropropane	9.642	77	142886	49.83	ug/L	97
39) cis-1,2-dichloroethene	9.611	96	89496	45.89	ug/L	97
40) methyl acrylate	9.690	85	13794	40.65	ug/L #	86
41) propionitrile	9.669	54	181731	291.26	ug/L	90
42) bromochloromethane	9.930	128	44740	41.99	ug/L #	85
43) tetrahydrofuran	9.982	42	35001	31.91	ug/L	91
44) chloroform	9.988	83	133410	43.98	ug/L	96
45) tert-butyl formate	10.061	59	44568	23.88	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.867	67	37692	40.64	ug/L	90
48) cyclohexane	10.375	84	156850	55.78	ug/L	93
49) 1,1,1-trichloroethane	10.286	97	142562	52.03	ug/L	97
50) iso-butyl alcohol	10.443	43	70803	413.59	ug/L	97
51) 1,1-dichloropropene	10.464	75	107430	47.04	ug/L	97
52) carbon tetrachloride	10.495	117	123733	52.63	ug/L	99
53) tert-amyl alcohol	10.589	73	56288	226.78	ug/L	97
56) benzene	10.730	78	312878	45.46	ug/L	99
57) iso-octane	10.783	57	343413	50.72	ug/L	97
58) tert-amyl methyl ether	10.788	73	265278	44.29	ug/L	98
59) heptane	10.950	71	65647	50.70	ug/L	93
60) isopropyl acetate	10.662	87	20209	47.46	ug/L	# 76
61) 1,2-dichloroethane	10.725	62	91974	42.19	ug/L	97
62) n-butyl alcohol	11.212	56	221157	2078.82	ug/L	93
63) ethyl acrylate	11.473	55	90235	38.19	ug/L	96
64) trichloroethylene	11.463	95	75376	48.49	ug/L	98
65) 2-nitropropane	12.258	41	19152	22.95	ug/L	# 53
66) methylcyclohexane	11.729	83	180027	51.77	ug/L	94
68) methyl methacrylate	11.750	100	21016	44.69	ug/L	# 54
69) 1,2-dichloropropane	11.740	63	79741	43.46	ug/L	91
70) dibromomethane	11.886	93	48988	46.82	ug/L	98
71) bromodichloromethane	12.027	83	100428	47.13	ug/L	99
72) epichlorohydrin	12.409	57	43968	169.04	ug/L	100
73) cis-1,3-dichloropropene	12.524	75	116314	45.35	ug/L	93
74) 4-methyl-2-pentanone	12.645	58	178695	181.24	ug/L	91
75) 3-methyl-1-butanol	12.639	55	158572	891.83	ug/L	95
78) toluene	12.937	92	184014	43.54	ug/L	98
79) trans-1,3-dichloropropene	13.126	75	97497	41.56	ug/L	96
80) ethyl methacrylate	13.141	69	101619	42.87	ug/L	92
81) 1,1,2-trichloroethane	13.356	83	55232	43.52	ug/L	99
82) 2-hexanone	13.565	58	151387	166.52	ug/L	94
83) tetrachloroethene	13.570	166	83566	50.23	ug/L	95
84) 1,3-dichloropropane	13.560	76	103467	42.02	ug/L	99
85) butyl acetate	13.654	56	56727	43.31	ug/L	89
87) dibromochloromethane	13.842	129	75791	44.74	ug/L	97
88) 1,2-dibromoethane	14.015	107	73244	48.89	ug/L	97
89) n-butyl ether	14.486	57	350966	45.37	ug/L	97
90) chlorobenzene	14.543	112	199505	48.67	ug/L	98
91) 1,1,1,2-tetrachloroethane	14.611	131	95895	48.50	ug/L	98
92) ethylbenzene	14.616	91	362301	48.89	ug/L	99
93) m,p-xylene	14.737	106	280782	100.02	ug/L	99
94) o-xylene	15.207	106	157685	51.69	ug/L	99
95) styrene	15.207	104	220653	48.71	ug/L	98
96) butyl acrylate	15.009	55	149595	41.71	ug/L	99
97) bromoform	15.479	173	55259	50.54	ug/L	99
98) isopropylbenzene	15.594	105	434678	52.28	ug/L	99
99) cis-1,4-dichloro-2-butene	15.641	75	31424	37.89	ug/L	98
102) bromobenzene	16.023	156	88866	46.57	ug/L	98
103) 1,1,2,2-tetrachloroethane	15.898	83	120970	43.74	ug/L	99
104) trans-1,4-dichloro-2-b...	15.950	53	21630	40.43	ug/L	94
105) 1,2,3-trichloropropane	15.992	110	31036	47.17	ug/L	97
106) n-propylbenzene	16.055	91	464559	47.47	ug/L	99
107) 2-chlorotoluene	16.206	126	99907	49.97	ug/L	95
108) 4-chlorotoluene	16.321	91	240487	46.58	ug/L	98
110) 1,3,5-trimethylbenzene	16.222	105	363077	47.72	ug/L	99
111) tert-butylbenzene	16.619	134	75815	48.86	ug/L	92
112) 1,2,4-trimethylbenzene	16.667	105	350929	47.28	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

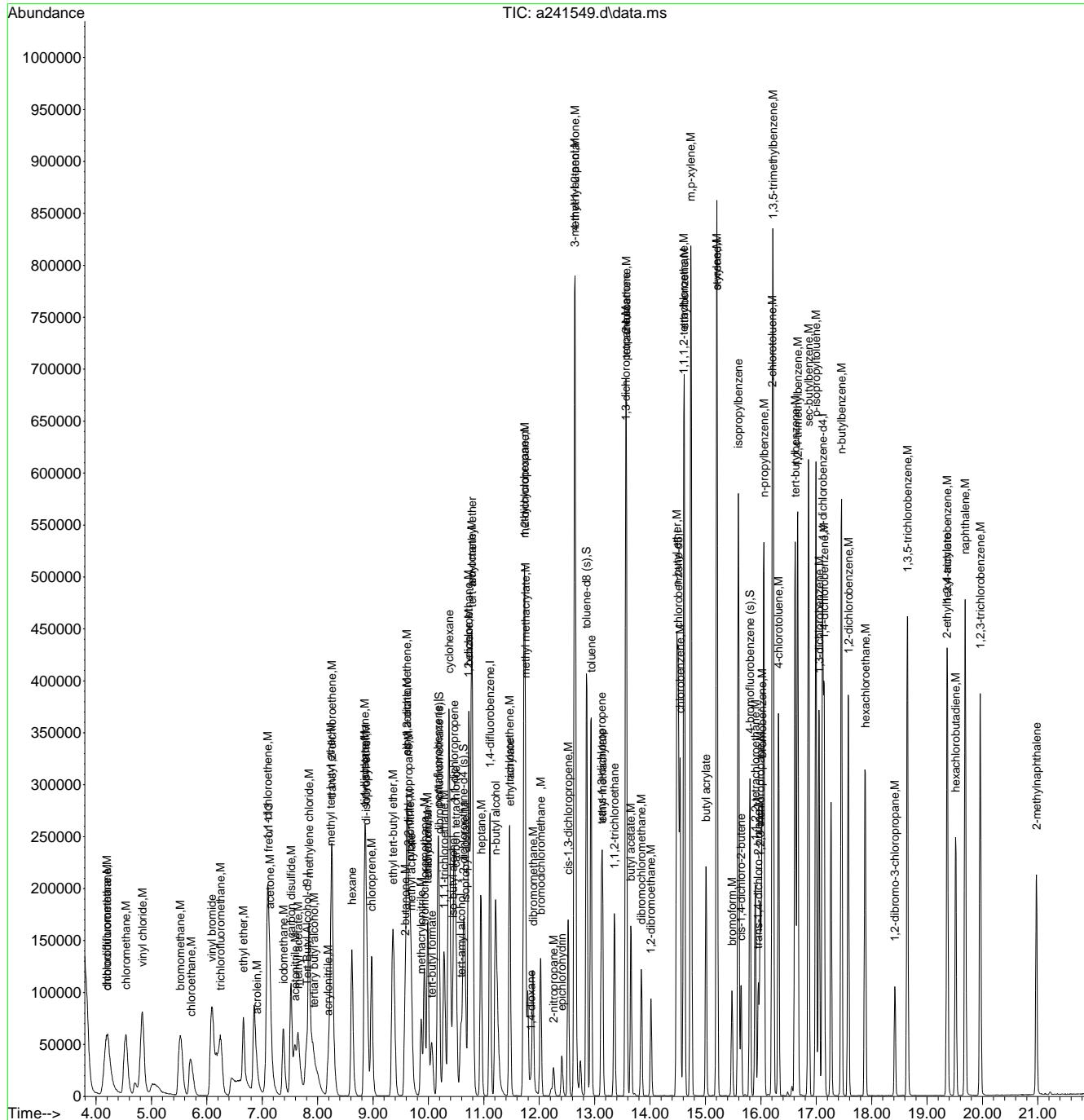
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
113) sec-butylbenzene	16.865	105	489131	49.32	ug/L	99
114) 1,3-dichlorobenzene	17.054	146	175604	48.13	ug/L	98
115) p-isopropyltoluene	16.996	119	405572	49.38	ug/L	99
116) 1,4-dichlorobenzene	17.142	146	174360	47.02	ug/L	98
117) 1,2-dichlorobenzene	17.582	146	184993	46.33	ug/L	98
119) n-butylbenzene	17.456	92	200804	46.53	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.419	157	36540	48.96	ug/L	96
122) 1,3,5-trichlorobenzene	18.649	180	170855	45.21	ug/L	97
123) 2-ethylhexyl acrylate	19.360	70	17090	5.97	ug/L	96
124) 1,2,4-trichlorobenzene	19.365	180	155824	47.56	ug/L	98
125) hexachlorobutadiene	19.517	225	65537	47.75	ug/L	97
126) naphthalene	19.690	128	435981	52.46	ug/L	99
127) 1,2,3-trichlorobenzene	19.962	180	152466	51.48	ug/L	94
128) hexachloroethane	17.885	201	68507	47.75	ug/L	98
129) 2-methylnaphthalene	20.976	142	124815	38.31	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
Data File : a241549.d
Acq On : 10 May 2018 11:30 am
Operator : oyinadei
Sample : jc65633-9ms Inst : MSA
Misc : MS26140,VA9204,5,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
Quant Results File: MA9165.RES
Quant Time: May 10 23:06:43 2018
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 17 15:31:13 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.799	65	247323	500.00	ug/L	-0.01
5) pentafluorobenzene	10.168	168	183052	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	275053	50.00	ug/L	0.00
76) chlorobenzene-d5	14.509	117	245859	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	139552	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.195	113	92869	50.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.80%	
55) 1,2-dichloroethane-d4 (s)	10.634	65	94425	48.19	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	96.38%	
77) toluene-d8 (s)	12.857	98	308309	46.93	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.86%	
101) 4-bromofluorobenzene (s)	15.801	95	109851	48.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.66%	
Target Compounds						
3) tertiary butyl alcohol	7.925	59	114546	261.39	ug/L	94
4) 1,4-dioxane	11.852	88	31896	1157.26	ug/L	93
6) chlorodifluoromethane	4.185	51	100943	35.78	ug/L	87
7) dichlorodifluoromethane	4.175	85	200066	64.78	ug/L	98
10) chloromethane	4.530	50	177322	50.33	ug/L	99
11) vinyl chloride	4.828	62	202661	55.86	ug/L	96
13) bromomethane	5.514	94	110935	54.32	ug/L	98
14) chloroethane	5.697	64	88889	54.95	ug/L	98
15) vinyl bromide	6.089	106	167835	90.53	ug/L	99
16) trichlorofluoromethane	6.246	101	168484	58.35	ug/L	99
17) ethyl ether	6.654	74	42637	45.22	ug/L	86
18) acrolein	6.894	56	17087	31.19	ug/L	96
19) freon 113	7.104	151	89488	62.38	ug/L	98
20) 1,1-dichloroethene	7.098	96	83139	48.96	ug/L	92
21) acetone	7.135	58	41633	152.41	ug/L	92
22) acetonitrile	7.590	41	169177	386.44	ug/L	96
23) iodomethane	7.381	142	137593	40.17	ug/L	97
24) carbon disulfide	7.517	76	262977	40.11	ug/L	98
25) methylene chloride	7.841	84	90319	46.11	ug/L	90
26) methyl acetate	7.647	43	72191	35.60	ug/L	94
27) methyl tert butyl ether	8.238	73	291298	49.63	ug/L	97
28) trans-1,2-dichloroethene	8.259	96	80787	47.51	ug/L	94
29) hexane	8.620	57	108028	44.24	ug/L	95
30) di-isopropyl ether	8.871	45	256813	39.44	ug/L	85
31) ethyl tert-butyl ether	9.358	59	272785	46.29	ug/L	97
32) 2-butanone	9.577	72	50802	173.86	ug/L #	74
33) 1,1-dichloroethane	8.850	63	146288	43.63	ug/L	98
34) chloroprene	8.976	53	112589	43.78	ug/L	95
35) acrylonitrile	8.186	53	39113	39.03	ug/L	95
36) vinyl acetate	8.845	86	14764	43.58	ug/L #	54
37) ethyl acetate	9.614	45	13613	36.87	ug/L #	56
38) 2,2-dichloropropane	9.635	77	144085	50.14	ug/L	96
39) cis-1,2-dichloroethene	9.609	96	92078	47.12	ug/L	92
40) methyl acrylate	9.692	85	14179	41.70	ug/L #	73
41) propionitrile	9.666	54	184643	295.33	ug/L	90
42) bromochloromethane	9.928	128	45273	42.40	ug/L	86
43) tetrahydrofuran	9.985	42	35370	32.18	ug/L	91
44) chloroform	9.985	83	137016	45.08	ug/L	96
45) tert-butyl formate	10.064	59	27867	14.90	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.870	67	38066	40.96	ug/L	89
48) cyclohexane	10.372	84	156302	55.47	ug/L	92
49) 1,1,1-trichloroethane	10.278	97	145451	52.98	ug/L	97
50) iso-butyl alcohol	10.435	43	68041	396.65	ug/L	99
51) 1,1-dichloropropene	10.461	75	109448	47.83	ug/L	97
52) carbon tetrachloride	10.493	117	124619	52.90	ug/L	99
53) tert-amyl alcohol	10.597	73	56947	228.97	ug/L	96
56) benzene	10.733	78	324076	46.97	ug/L	99
57) iso-octane	10.780	57	354584	52.24	ug/L	98
58) tert-amyl methyl ether	10.791	73	272438	45.36	ug/L	99
59) heptane	10.948	71	66799	51.46	ug/L	94
60) isopropyl acetate	10.665	87	20561	48.16	ug/L	# 75
61) 1,2-dichloroethane	10.723	62	95531	43.71	ug/L	97
62) n-butyl alcohol	11.209	56	215350	2019.08	ug/L	91
63) ethyl acrylate	11.471	55	92993	39.26	ug/L	95
64) trichloroethylene	11.465	95	77136	49.50	ug/L	99
65) 2-nitropropane	12.260	41	19964	23.86	ug/L	# 52
66) methylcyclohexane	11.727	83	180152	51.67	ug/L	94
68) methyl methacrylate	11.748	100	21876	46.40	ug/L	# 59
69) 1,2-dichloropropane	11.737	63	79959	43.47	ug/L	96
70) dibromomethane	11.884	93	49650	47.33	ug/L	98
71) bromodichloromethane	12.025	83	102469	47.97	ug/L	97
72) epichlorohydrin	12.407	57	40152	153.98	ug/L	99
73) cis-1,3-dichloropropene	12.522	75	117292	45.61	ug/L	95
74) 4-methyl-2-pentanone	12.642	58	184526	186.68	ug/L	89
75) 3-methyl-1-butanol	12.642	55	160789	902.00	ug/L	94
78) toluene	12.935	92	185349	44.61	ug/L	100
79) trans-1,3-dichloropropene	13.123	75	98356	42.64	ug/L	96
80) ethyl methacrylate	13.139	69	102878	44.14	ug/L	91
81) 1,1,2-trichloroethane	13.354	83	54775	43.90	ug/L	97
82) 2-hexanone	13.568	58	152713	170.84	ug/L	90
83) tetrachloroethene	13.573	166	83780	51.22	ug/L	97
84) 1,3-dichloropropane	13.557	76	103930	42.92	ug/L	98
85) butyl acetate	13.657	56	55342	42.94	ug/L	92
87) dibromochloromethane	13.845	129	74968	45.01	ug/L	99
88) 1,2-dibromoethane	14.018	107	74271	50.42	ug/L	96
89) n-butyl ether	14.483	57	344175	45.25	ug/L	97
90) chlorobenzene	14.541	112	197749	49.07	ug/L	99
91) 1,1,1,2-tetrachloroethane	14.609	131	97141	49.96	ug/L	97
92) ethylbenzene	14.619	91	360699	49.50	ug/L	100
93) m,p-xylene	14.740	106	280600	101.66	ug/L	100
94) o-xylene	15.205	106	155842	51.95	ug/L	100
95) styrene	15.210	104	221167	49.65	ug/L	99
96) butyl acrylate	15.011	55	151184	42.88	ug/L	97
97) bromoform	15.477	173	55411	51.55	ug/L	99
98) isopropylbenzene	15.597	105	432697	52.93	ug/L	99
99) cis-1,4-dichloro-2-butene	15.644	75	30097	36.90	ug/L	96
102) bromobenzene	16.021	156	88834	47.91	ug/L	95
103) 1,1,2,2-tetrachloroethane	15.901	83	122329	45.52	ug/L	99
104) trans-1,4-dichloro-2-b...	15.953	53	21127	40.63	ug/L	96
105) 1,2,3-trichloropropane	15.990	110	30457	47.63	ug/L	98
106) n-propylbenzene	16.052	91	457741	48.13	ug/L	100
107) 2-chlorotoluene	16.209	126	97136	49.99	ug/L	95
108) 4-chlorotoluene	16.319	91	238156	47.47	ug/L	98
110) 1,3,5-trimethylbenzene	16.225	105	356258	48.18	ug/L	99
111) tert-butylbenzene	16.617	134	76761	50.90	ug/L	93
112) 1,2,4-trimethylbenzene	16.664	105	346972	48.10	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
113) sec-butylbenzene	16.863	105	494992	51.36	ug/L	99
114) 1,3-dichlorobenzene	17.051	146	172612	48.68	ug/L	96
115) p-isopropyltoluene	16.994	119	404582	50.69	ug/L	99
116) 1,4-dichlorobenzene	17.140	146	172575	47.88	ug/L	100
117) 1,2-dichlorobenzene	17.579	146	180088	46.41	ug/L	97
119) n-butylbenzene	17.454	92	201747	48.10	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.422	157	36750	50.67	ug/L	94
122) 1,3,5-trichlorobenzene	18.646	180	172851	47.06	ug/L	99
123) 2-ethylhexyl acrylate	19.358	70	17728	6.37	ug/L	93
124) 1,2,4-trichlorobenzene	19.368	180	158026	49.63	ug/L	98
125) hexachlorobutadiene	19.520	225	66252	49.67	ug/L	96
126) naphthalene	19.687	128	448765	55.56	ug/L	99
127) 1,2,3-trichlorobenzene	19.959	180	155714	54.10	ug/L	97
128) hexachloroethane	17.883	201	68987	49.48	ug/L	99
129) 2-methylnaphthalene	20.974	142	134492	42.48	ug/L	99

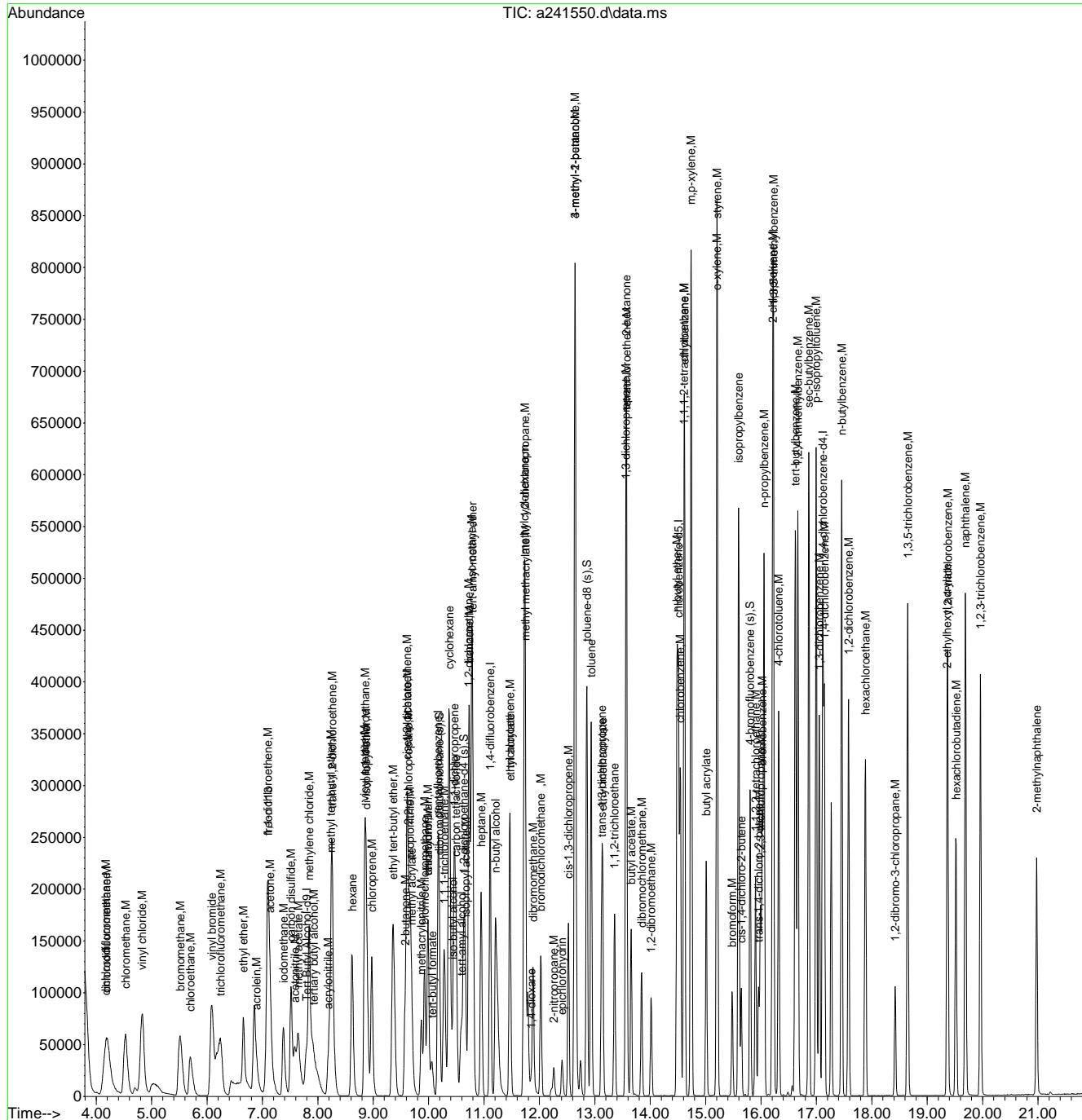
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Inst : MSA

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50468.d
 Acq On : 9 May 2018 4:24 pm
 Operator : JessicaP
 Sample : JC65733-2dup Inst : MS2V
 Misc : MS26177,V2V2014,5,,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 22:03:17 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

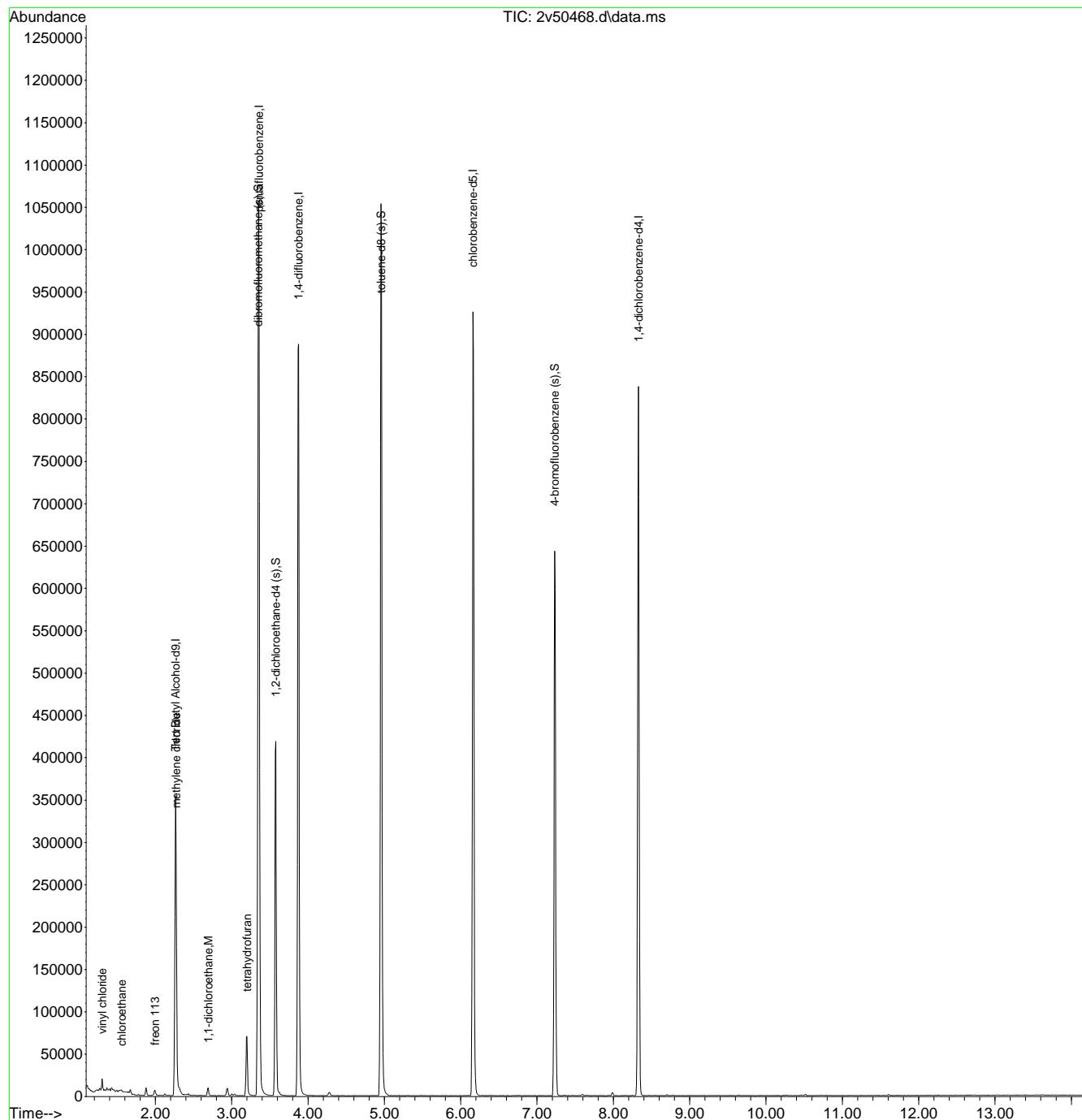
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	265864	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	341069	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	507184	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	374392	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	162626	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	184855	53.84	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	=	107.68%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	207253	58.79	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	=	117.58%	
77) toluene-d8 (s)	4.956	98	524379	54.22	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	=	108.44%	
100) 4-bromofluorobenzene (s)	7.231	95	173549	52.47	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	=	104.94%	
<hr/>						
Target Compounds						
11) vinyl chloride	1.302	62	6596	1.12	ug/L	98
13) chloroethane	1.559	64	1212	0.51	ug/L	76
20) freon 113	1.994	151	1310	0.51	ug/L	87
26) methylene chloride	2.272	84	10791	2.39	ug/L #	80
33) 1,1-dichloroethane	2.691	63	6253	0.75	ug/L	98
44) tetrahydrofuran	3.200	71	10927	13.87	ug/L #	75
<hr/>						

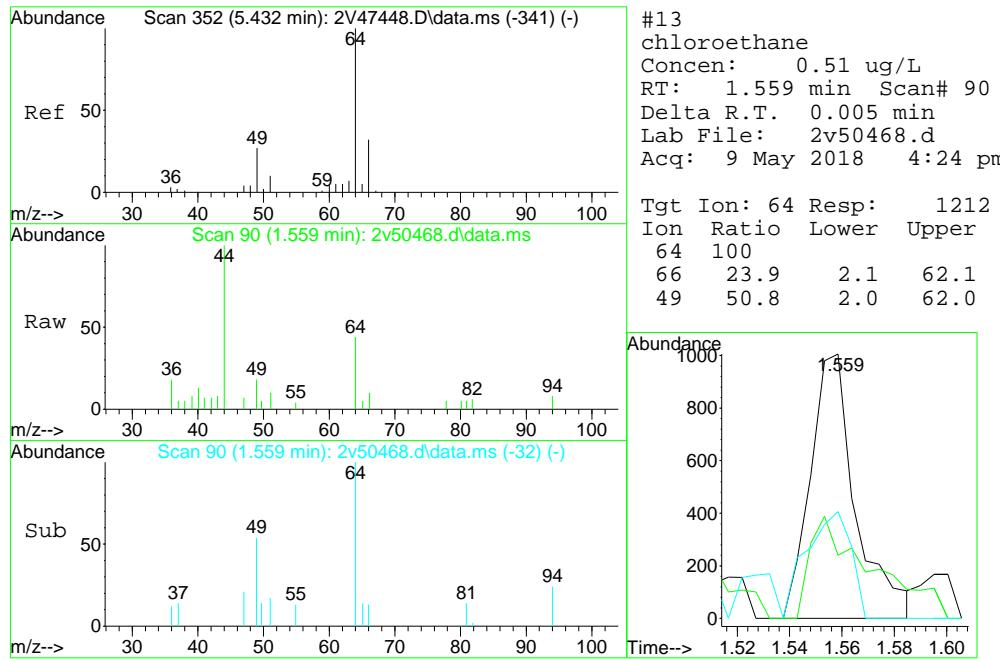
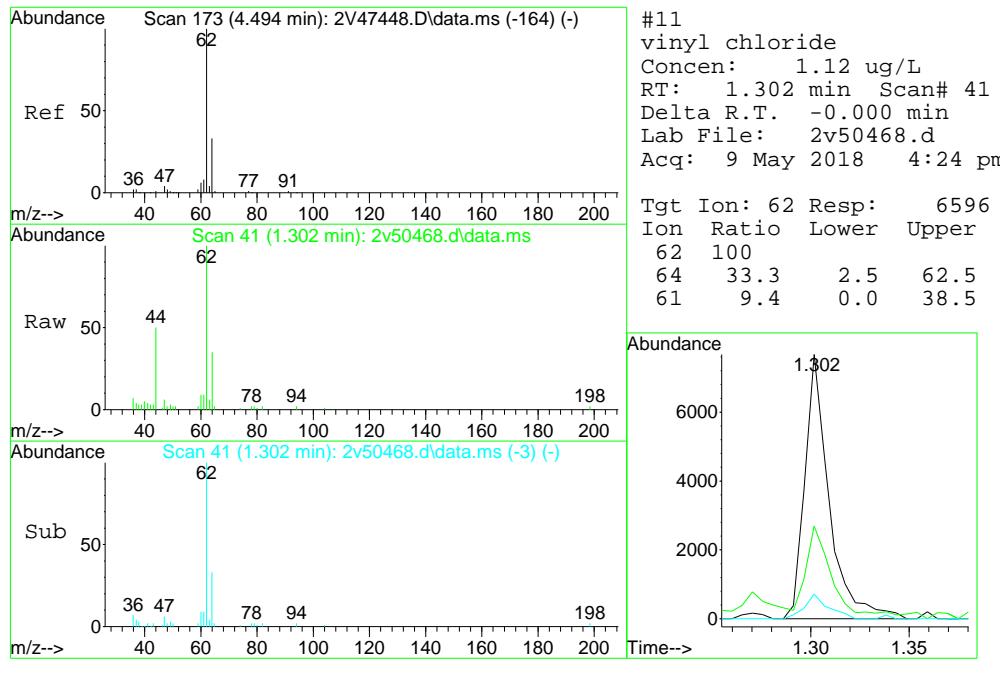
(#) = qualifier out of range (m) = manual integration (+) = signals summed

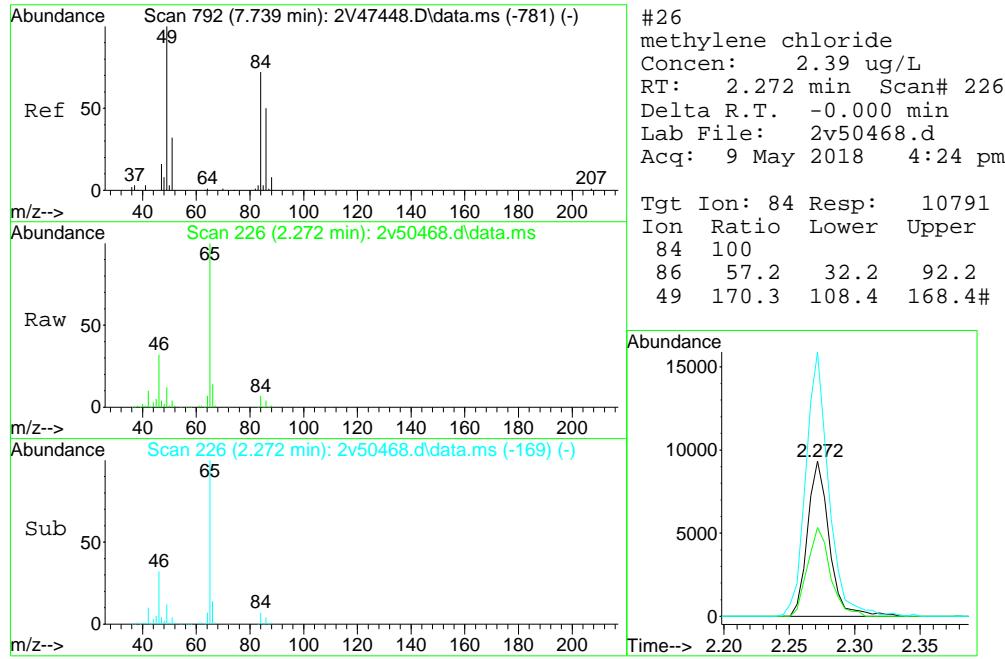
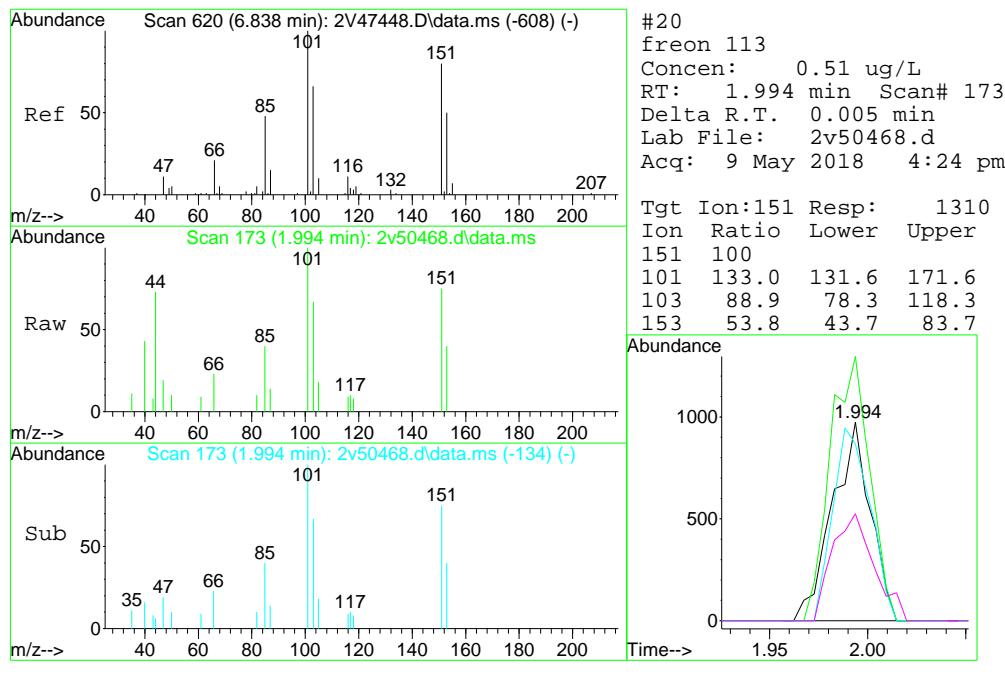
Quantitation Report (QT Reviewed)

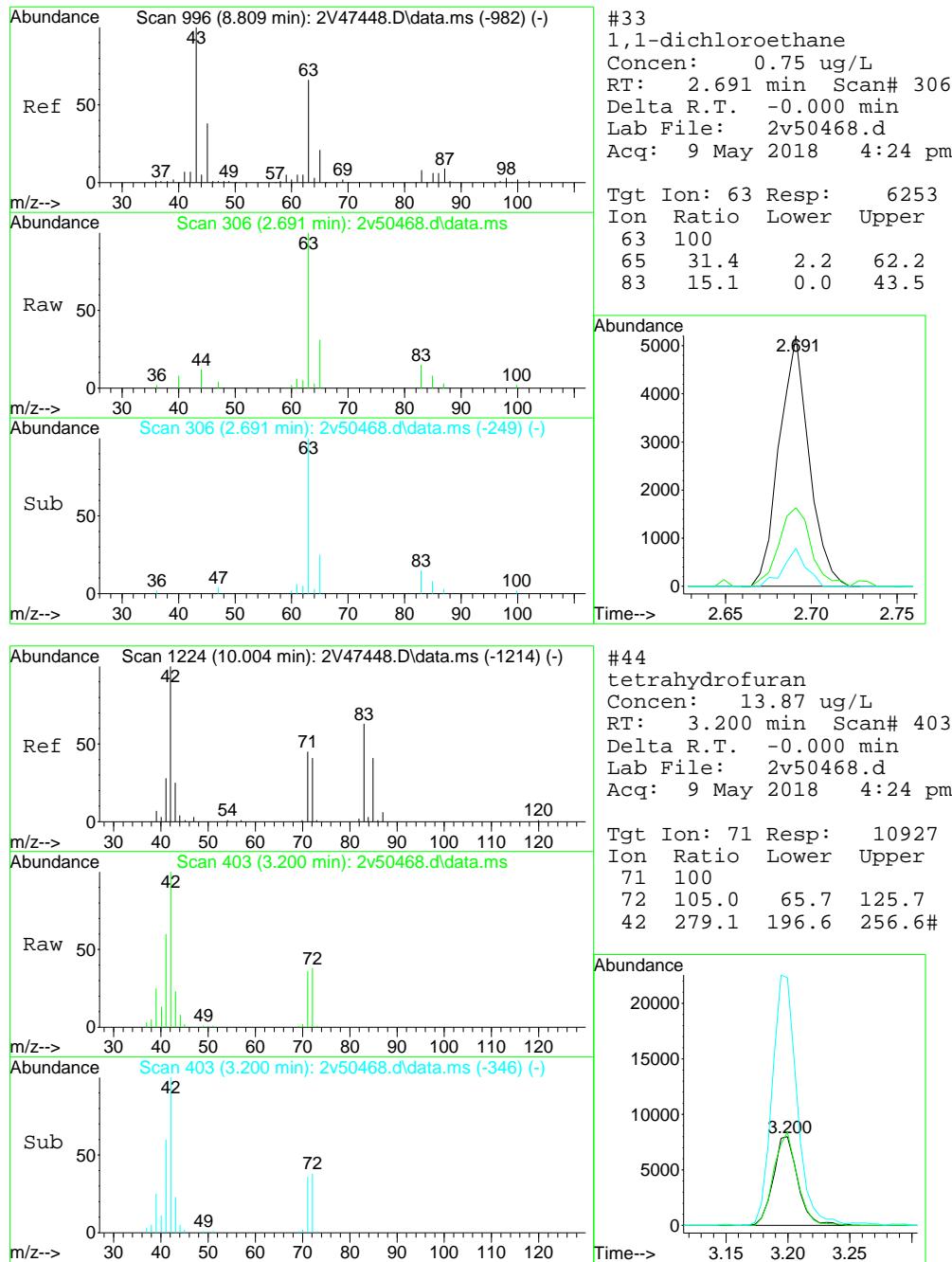
Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50468.d
 Acq On : 9 May 2018 4:24 pm
 Operator : JessicaP
 Sample : JC65733-2dup Inst : MS2V
 Misc : MS26177,V2V2014,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 22:03:17 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration





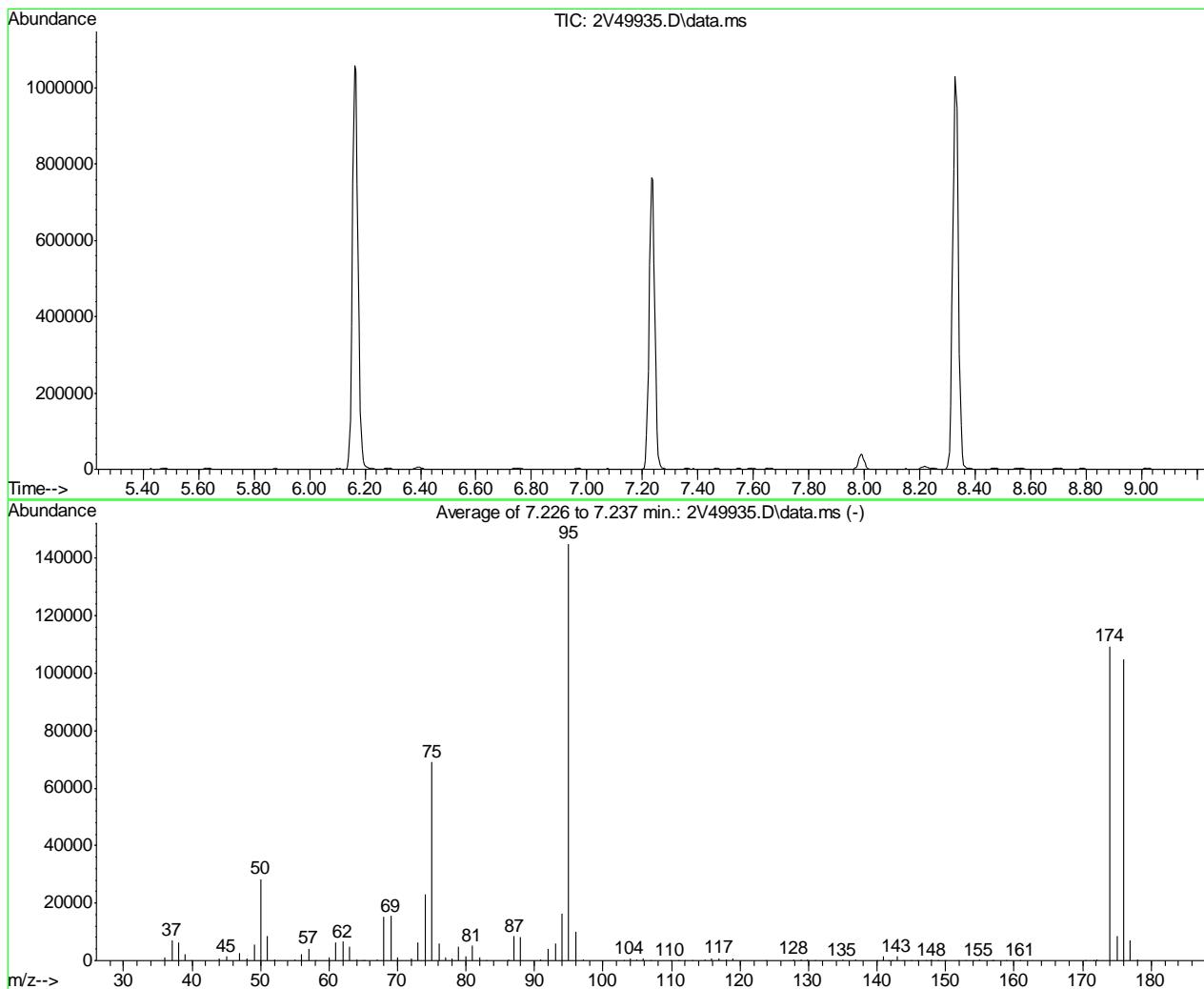




SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V2V1992\2V49935.D Vial: 2
 Acq On : 20 Apr 2018 9:15 pm Operator: JessicaP
 Sample : bfb Inst : MS2V
 Misc : MS25736,V2V1992,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)



AutoFind: Scans 1171, 1172, 1173; Background Corrected with Scan 1163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	28419	PASS
75	95	30	60	47.6	69003	PASS
95	95	100	100	100.0	145059	PASS
96	95	5	9	6.8	9905	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	75.4	109355	PASS
175	174	5	9	7.9	8677	PASS
176	174	95	101	95.9	104872	PASS
177	176	5	9	6.6	6929	PASS

Average of 7.226 to 7.237 min.: 2V49935.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1178	51.05	8695	64.90	62	77.00	1047
37.05	6907	52.05	378	65.10	52	77.95	749
38.00	6180	55.00	404	67.10	232	78.90	4838
39.05	2310	56.00	2287	68.00	15384	79.95	1332
39.95	15	57.00	4188	69.00	15496	80.90	5175
44.00	704	58.00	178	70.05	1218	81.95	1025
45.00	1394	60.00	1208	72.00	654	82.90	44
47.00	2476	61.00	6458	73.00	6276	86.15	251
48.00	868	62.00	6566	74.00	23173	87.00	8478
49.05	5566	63.00	4823	75.00	69003	88.00	8302
50.00	28419	64.00	466	76.05	6055	90.95	549

Average of 7.226 to 7.237 min.: 2V49935.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	3937	109.90	113	128.95	241	144.95	146
93.00	5850	110.95	89	129.85	546	145.85	185
94.00	16339	112.00	39	130.95	144	147.10	39
95.00	145059	112.95	104	134.95	283	147.95	334
96.05	9905	114.90	204	136.90	217	148.80	39
97.05	361	115.90	582	139.95	127	149.90	180
103.00	40	116.95	906	141.00	1312	151.90	34
103.95	686	117.95	528	141.70	92	152.90	79
104.95	253	119.00	734	142.10	38	154.00	42
105.90	667	123.80	33	142.95	1369	154.95	325
106.90	185	127.90	550	143.90	40	156.80	39

Average of 7.226 to 7.237 min.: 2V49935.D\data.ms

bfb

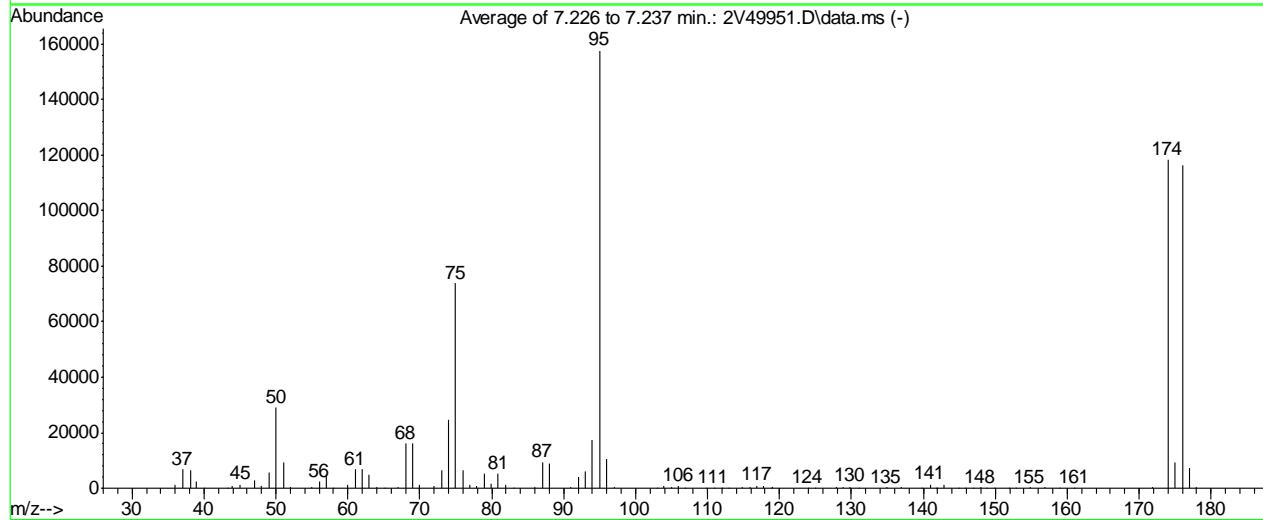
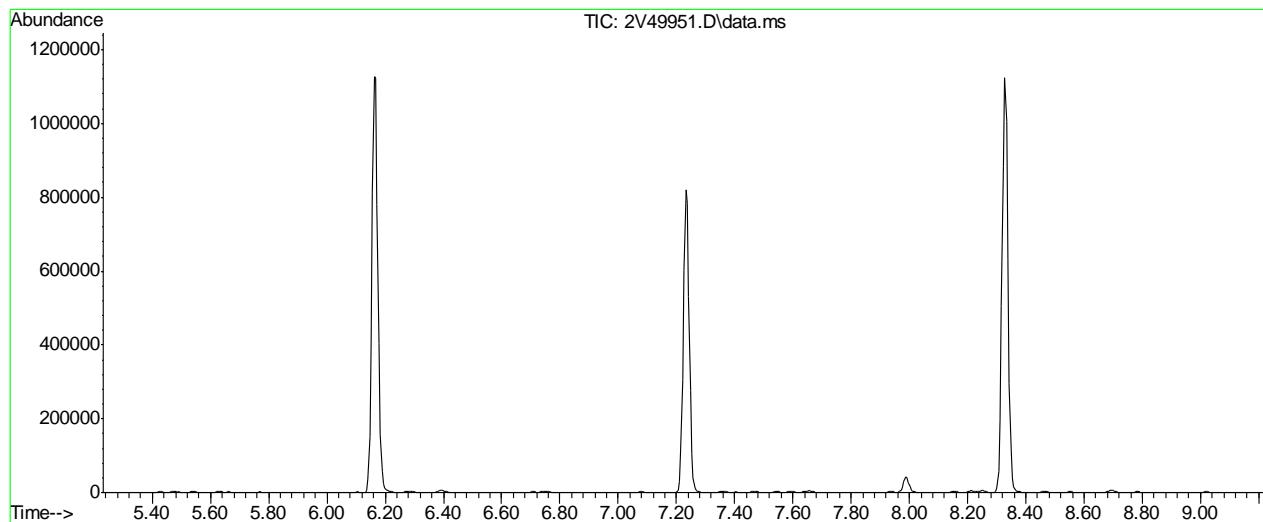
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
156.95	158						
158.90	128						
160.90	190						
170.40	34						
171.60	64						
172.05	299						
174.00	109355						
175.00	8677						
176.00	104872						
177.00	6929						
178.00	219						

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\V2V1992\2V49951.D Vial: 1
 Acq On : 23 Apr 2018 8:45 am Operator: JessicaP
 Sample : bfb2 Inst : MS2V
 Misc : MS25736,V2V1992,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)



AutoFind: Scans 1171, 1172, 1173; Background Corrected with Scan 1163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.4	29075	PASS
75	95	30	60	46.8	73819	PASS
95	95	100	100	100.0	157696	PASS
96	95	5	9	6.6	10395	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	75.0	118291	PASS
175	174	5	9	7.9	9358	PASS
176	174	95	101	98.3	116291	PASS
177	176	5	9	6.4	7485	PASS

Average of 7.226 to 7.237 min.: 2V49951.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1260	50.00	29075	64.00	409	77.00	1054
37.00	6865	51.05	9111	65.10	34	77.95	724
38.10	6361	52.05	402	67.05	485	78.90	5213
39.00	2512	54.95	395	68.00	16106	79.95	1437
40.00	46	56.00	2272	69.00	16013	80.90	5226
43.30	45	57.00	4402	70.00	1349	81.90	1163
43.95	831	58.00	203	72.00	688	83.00	38
45.05	1399	60.00	1341	73.05	6389	86.00	298
47.00	2732	61.00	6860	74.00	24461	87.00	9298
47.95	890	62.00	6748	75.00	73819	88.00	9034
49.00	5838	63.00	5021	76.05	6322	90.95	568

Average of 7.226 to 7.237 min.: 2V49951.D\data.ms

bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	4197	109.90	83	124.90	36	142.90	1263
93.00	6099	110.85	117	127.90	462	144.85	100
94.00	17404	112.00	46	128.90	273	145.90	184
95.00	157696	112.95	125	129.85	550	146.85	81
96.00	10395	114.85	232	130.95	206	147.95	359
97.05	328	115.90	584	134.90	286	148.80	45
102.90	47	116.90	987	136.90	260	149.95	141
103.90	687	117.85	634	139.75	79	151.90	50
104.95	293	118.80	145	140.95	1268	152.90	126
105.95	703	118.95	542	141.80	112	154.85	400
106.90	213	123.95	86	142.00	60	156.85	216

Average of 7.226 to 7.237 min.: 2V49951.D\data.ms

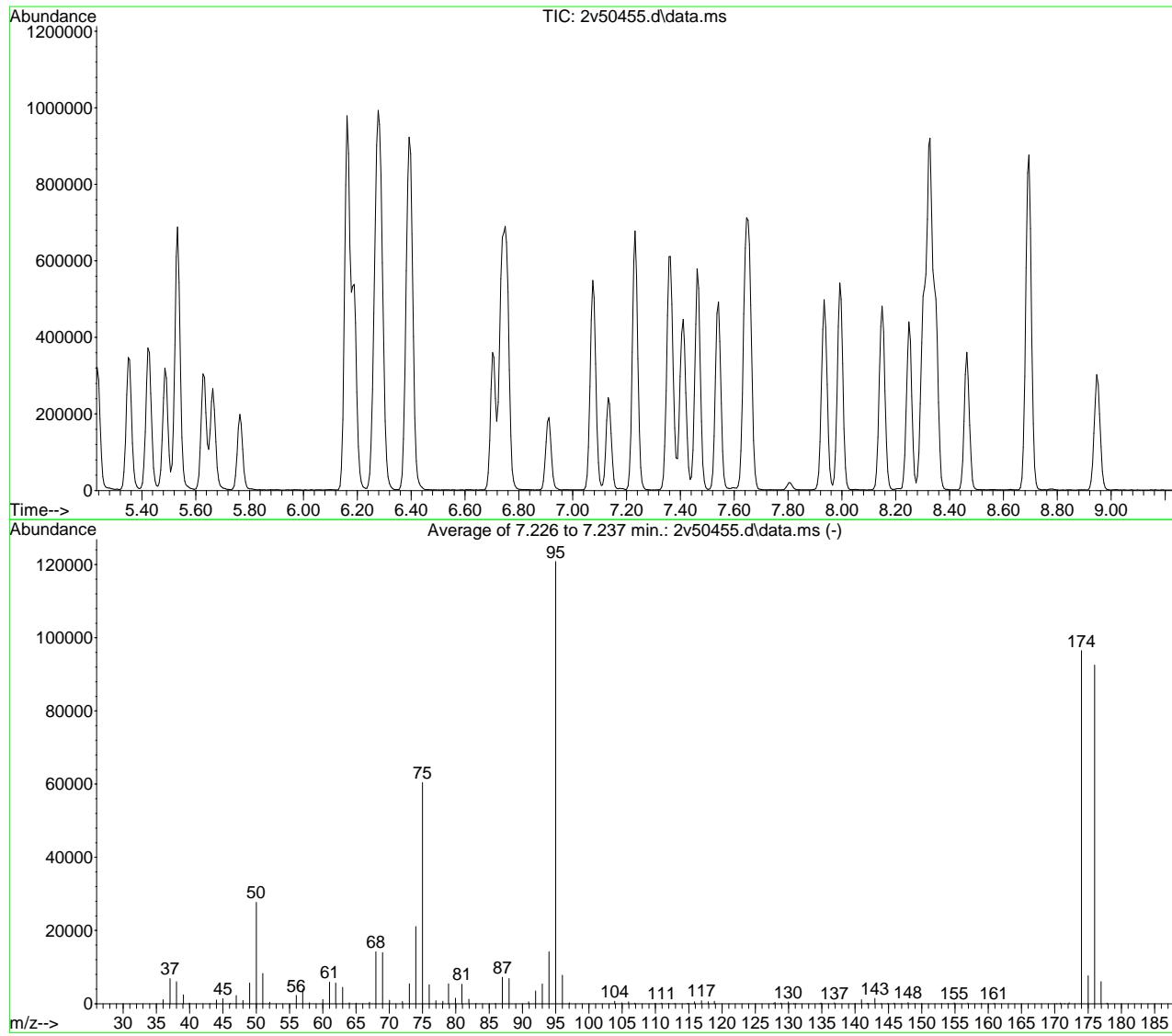
bfb2

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
158.90	174						
160.95	143						
171.80	261						
174.00	118291						
175.00	9358						
176.00	116291						
177.00	7485						
177.90	251						

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ja...-18\v2v2014\2v50455.d Vial: 4
 Acq On : 9 May 2018 9:48 am Operator: JessicaP
 Sample : bfb Inst : MS2V
 Misc : MS26108,V2V2014,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)



AutoFind: Scans 1171, 1172, 1173; Background Corrected with Scan 1163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.9	27696	PASS
75	95	30	60	50.0	60427	PASS
95	95	100	100	100.0	120843	PASS
96	95	5	9	6.5	7813	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	79.8	96483	PASS
175	174	5	9	7.9	7647	PASS
176	174	95	101	96.0	92584	PASS
177	176	5	9	6.5	6046	PASS

Average of 7.226 to 7.237 min.: 2v50455.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1090	49.00	5706	64.00	252	77.00	783
37.05	6862	50.00	27696	65.05	146	78.05	662
38.00	6025	51.00	8282	67.00	417	78.90	5444
39.05	2405	52.05	401	68.00	14213	79.95	1518
39.95	153	56.00	2299	69.00	13957	80.90	5303
43.10	44	57.00	3975	70.05	974	81.95	1256
44.00	1048	58.00	258	71.95	630	83.05	129
45.00	1364	60.00	1133	73.00	5430	85.95	143
46.10	142	61.00	5912	74.00	21064	87.00	7217
47.00	2255	61.95	5655	75.00	60427	88.00	6903
48.00	875	63.00	4467	76.00	5170	90.95	554

Average of 7.226 to 7.237 min.: 2v50455.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	3508	110.90	187	128.85	214	142.95	1419
93.00	5372	111.95	102	129.95	440	143.90	64
94.00	14180	112.90	119	130.80	131	144.90	73
95.00	120843	114.80	64	131.10	67	145.85	194
96.00	7813	114.95	101	134.70	91	147.00	37
97.05	244	115.85	565	134.90	170	147.95	291
103.85	668	116.90	819	136.90	246	148.95	140
104.95	252	117.90	548	140.00	78	150.00	50
105.95	564	118.85	640	140.95	1099	153.00	46
106.90	187	127.80	125	141.80	79	153.90	40
109.95	91	127.95	392	142.00	117	154.90	223

Average of 7.226 to 7.237 min.: 2v50455.d\data.ms

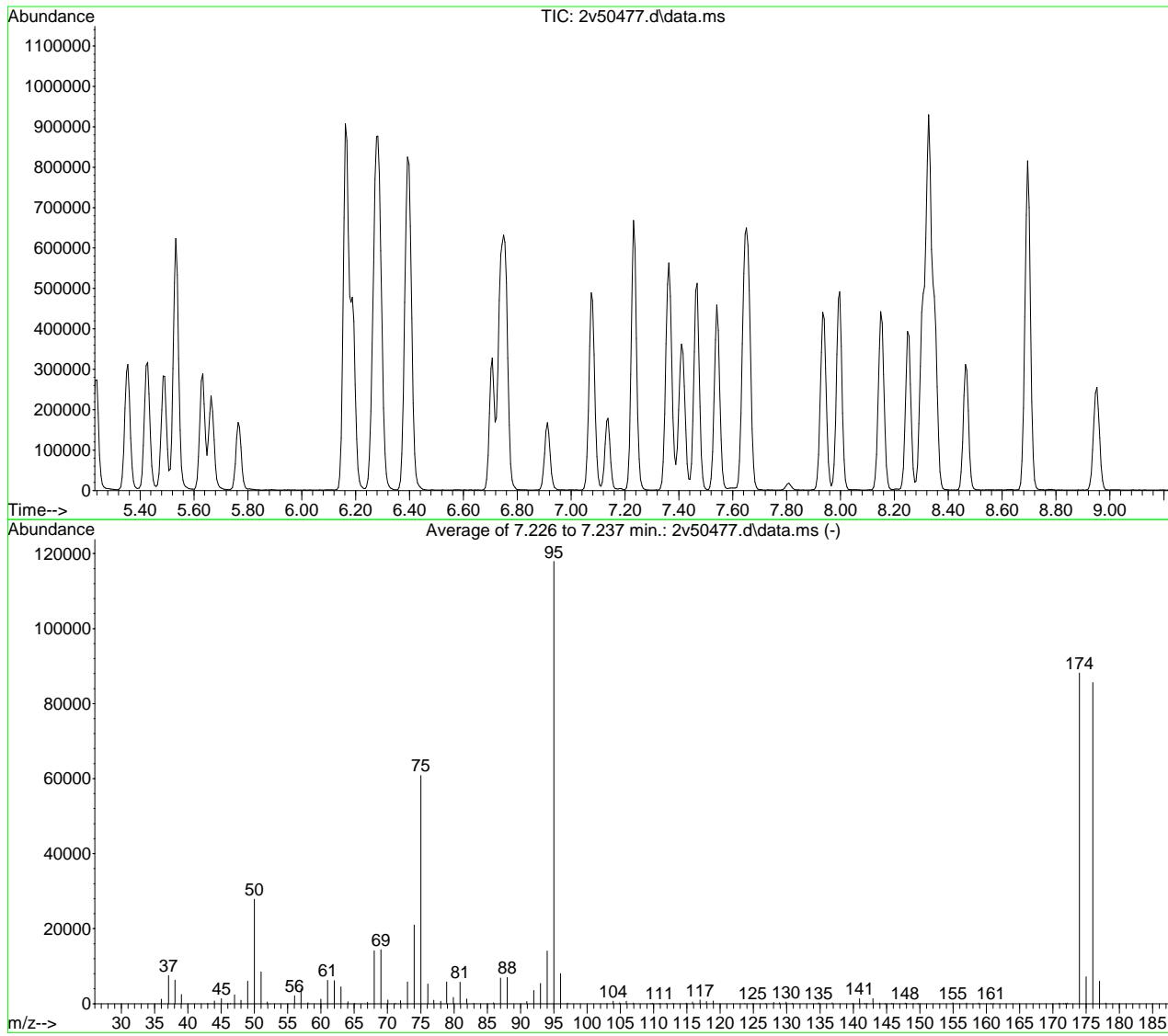
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
156.95	199	177.85	183				
158.95	142						
160.85	129						
170.30	37						
170.85	149						
171.50	57						
172.15	266						
174.00	96483						
175.00	7647						
176.00	92584						
176.95	6046						

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ni...-18\v2v2015\2v50477.d Vial: 2
 Acq On : 10 May 2018 6:26 am Operator: JessicaP
 Sample : bfb Inst : MS2V
 Misc : MS26169,V2V2015,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M2V1992.M (RTE Integrator)
 Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)



AutoFind: Scans 1171, 1172, 1173; Background Corrected with Scan 1163

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.6	27829	PASS
75	95	30	60	51.6	60847	PASS
95	95	100	100	100.0	117877	PASS
96	95	5	9	6.8	8035	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	74.8	88149	PASS
175	174	5	9	8.1	7165	PASS
176	174	95	101	97.2	85640	PASS
177	176	5	9	7.0	5995	PASS

Average of 7.226 to 7.237 min.: 2v50477.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1172	49.00	6016	64.05	524	76.05	5232
37.10	7530	50.00	27829	65.05	109	76.95	896
38.05	6264	51.00	8500	67.00	383	78.00	649
39.05	2455	51.95	417	68.00	14150	78.90	5814
43.00	113	56.05	2130	69.00	14379	79.90	1686
44.00	737	57.00	3949	70.05	1013	80.90	5704
45.05	1315	58.05	214	71.20	105	81.90	1302
46.00	77	60.00	1224	71.95	772	82.95	128
46.40	47	61.00	6242	73.00	5806	85.95	212
47.00	2361	62.00	6177	74.00	20963	87.00	6835
48.00	932	63.00	4532	75.00	60847	88.00	6956

Average of 7.226 to 7.237 min.: 2v50477.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.95	560	106.95	190	123.70	48	141.70	76
92.00	3559	109.60	34	124.90	71	142.05	102
93.00	5394	109.80	81	126.80	36	142.95	1334
94.00	14073	110.90	139	128.05	374	143.95	150
95.00	117877	111.90	52	128.90	261	144.80	58
96.00	8035	112.95	136	129.90	461	145.80	109
97.05	199	114.90	152	130.85	134	146.00	45
103.00	40	115.85	466	134.80	253	147.80	160
103.90	670	116.95	1011	136.85	254	148.00	81
104.90	245	117.95	573	139.90	136	149.00	41
105.90	637	118.95	749	140.95	1342	149.75	94

Average of 7.226 to 7.237 min.: 2v50477.d\data.ms

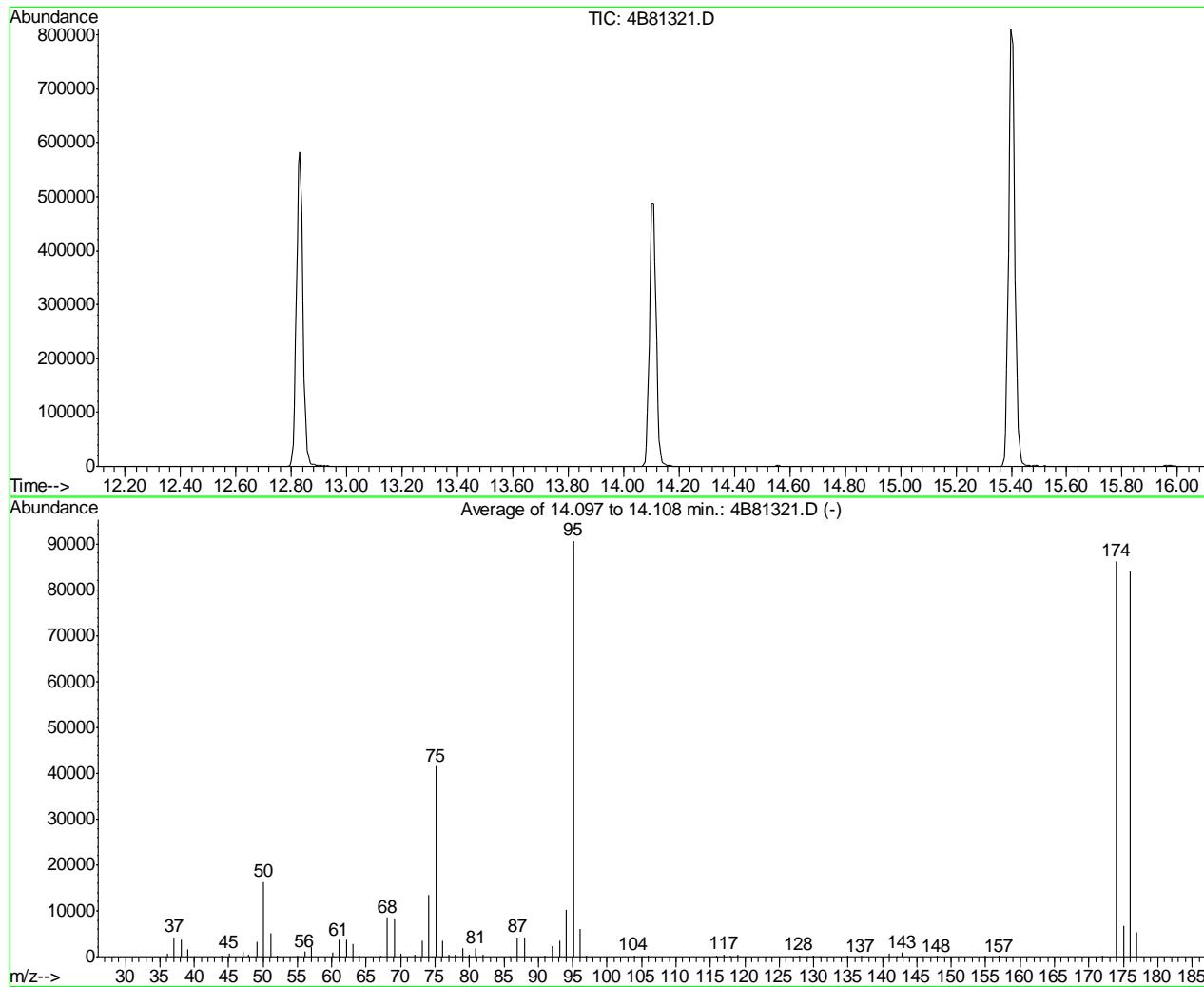
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
154.95	242	176.00	85640				
157.00	153	177.00	5995				
158.85	166	177.95	191				
160.70	51						
161.10	45						
170.95	175						
171.60	62						
171.90	95						
172.20	174						
174.00	88149						
175.00	7165						

SW-846 Method 8260
 Data File : C:\MSDCHEM\1\DATA\V4B3370\4B81321.D Vial: 2
 Acq On : 25 Apr 2018 3:08 pm Operator: HueanhT
 Sample : bfb Inst : MS4B
 Misc : MS25764,V4B3370,,5,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2030, 2031, 2032; Background Corrected with Scan 2022

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	16281	PASS
75	95	30	60	45.8	41533	PASS
95	95	100	100	100.0	90725	PASS
96	95	5	9	6.7	6121	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	95.1	86293	PASS
175	174	5	9	7.8	6714	PASS
176	174	95	101	97.3	84002	PASS
177	176	5	9	6.5	5433	PASS

Average of 14.097 to 14.108 min.: 4B81321.D

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	703	51.10	5085	68.10	8529	80.00	591
37.10	4292	52.05	217	69.10	8332	80.95	1919
38.10	3636	55.05	240	70.05	627	81.95	466
39.10	1569	56.05	1110	72.05	458	85.90	52
40.05	3	57.10	2119	73.10	3520	87.00	4250
44.00	255	60.05	866	74.10	13566	88.00	4233
45.05	760	61.05	3681	75.10	41533	90.95	256
47.10	1223	62.10	3626	76.10	3472	92.05	2248
47.95	511	63.10	2743	77.00	496	93.05	3446
49.10	3291	64.00	196	77.95	400	94.10	10118
50.10	16281	67.15	148	79.00	1826	95.10	90725

Average of 14.097 to 14.108 min.: 4B81321.D

bfb

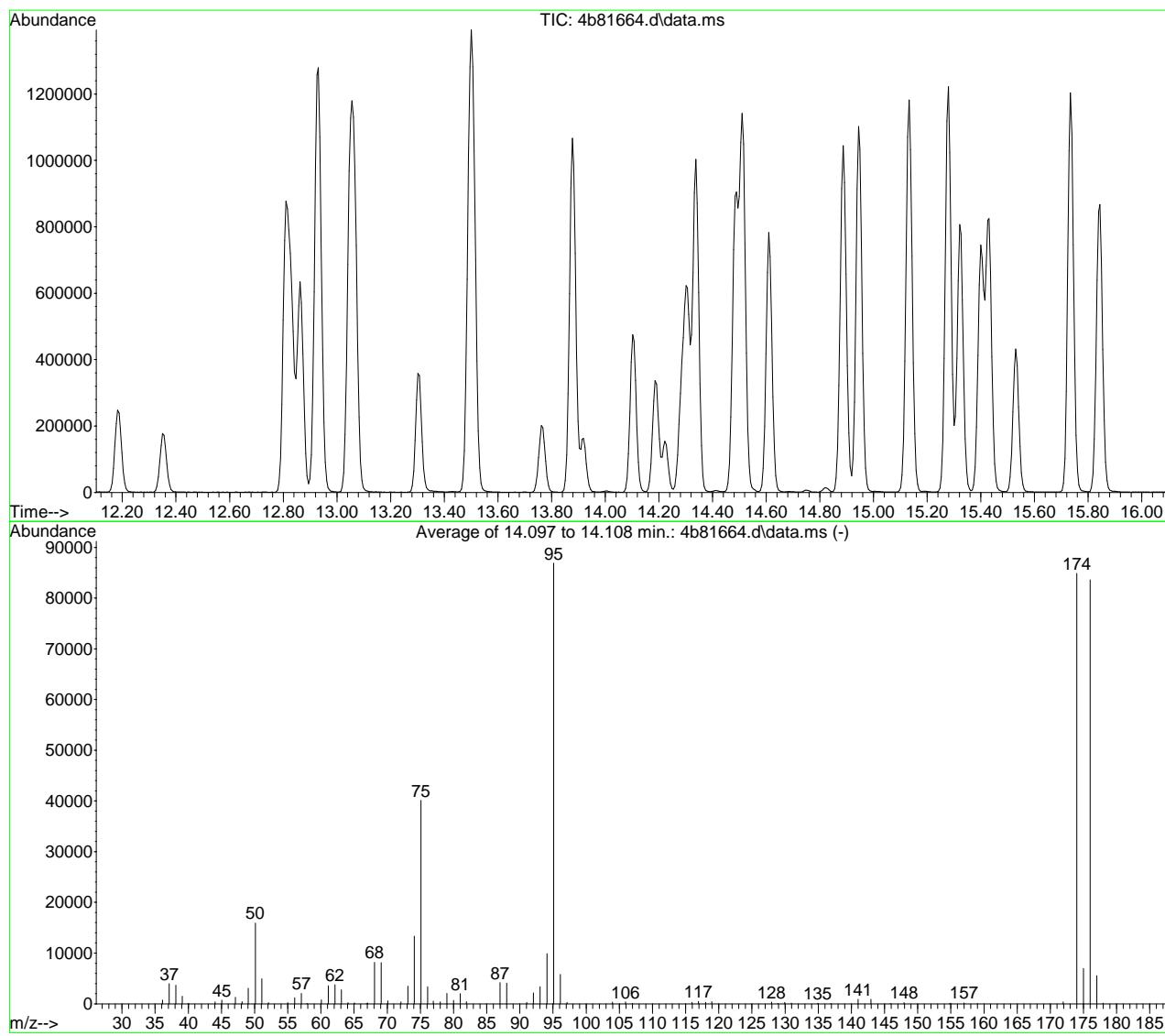
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.10	6121	129.80	72	157.00	226		
97.05	226	130.05	206	171.95	244		
103.95	333	130.90	51	174.00	86293		
105.00	63	134.95	138	175.00	6714		
105.95	292	136.95	183	176.00	84002		
115.90	259	140.95	820	177.00	5433		
117.00	544	142.00	55				
117.95	231	142.90	876				
118.95	429	145.80	51				
127.95	334	147.95	150				
129.00	112	154.95	196				

SW-846 Method 8260

Data File : C:\msdchem\1\data\ja...-18\v4b3388\4b81664.d Vial: 1
 Acq On : 8 May 2018 7:05 pm Operator: HueanhT
 Sample : bfb Inst : MS4B
 Misc : MS26139,V4B3388,5,,,,1 Multiplr: 1.00
 MS Integration Params: rteint.p

Method : C:\MSDCHEM\1\METHODS\M4B3370.M (RTE Integrator)
 Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um



AutoFind: Scans 2030, 2031, 2032; Background Corrected with Scan 2022

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	15918	PASS
75	95	30	60	46.2	40112	PASS
95	95	100	100	100.0	86885	PASS
96	95	5	9	6.7	5816	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	97.7	84853	PASS
175	174	5	9	8.2	6977	PASS
176	174	95	101	98.6	83624	PASS
177	176	5	9	6.6	5539	PASS

Average of 14.097 to 14.108 min.: 4b81664.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	740	51.10	4958	65.05	197	76.95	539
37.10	3963	52.10	243	66.90	91	78.00	392
38.10	3681	55.00	237	67.05	168	79.00	2034
39.10	1473	56.05	1169	68.10	8196	80.00	697
39.95	3	57.05	2078	69.10	8148	81.00	2015
44.05	397	57.90	64	70.10	608	81.95	451
45.05	752	60.05	794	72.05	371	87.00	4160
47.10	1301	61.10	3577	73.10	3477	88.00	4078
48.10	459	62.10	3760	74.10	13340	91.05	280
49.05	3090	63.10	2748	75.10	40112	92.05	2174
50.10	15918	64.10	239	76.10	3392	93.05	3390

Average of 14.097 to 14.108 min.: 4b81664.d\data.ms

bfb

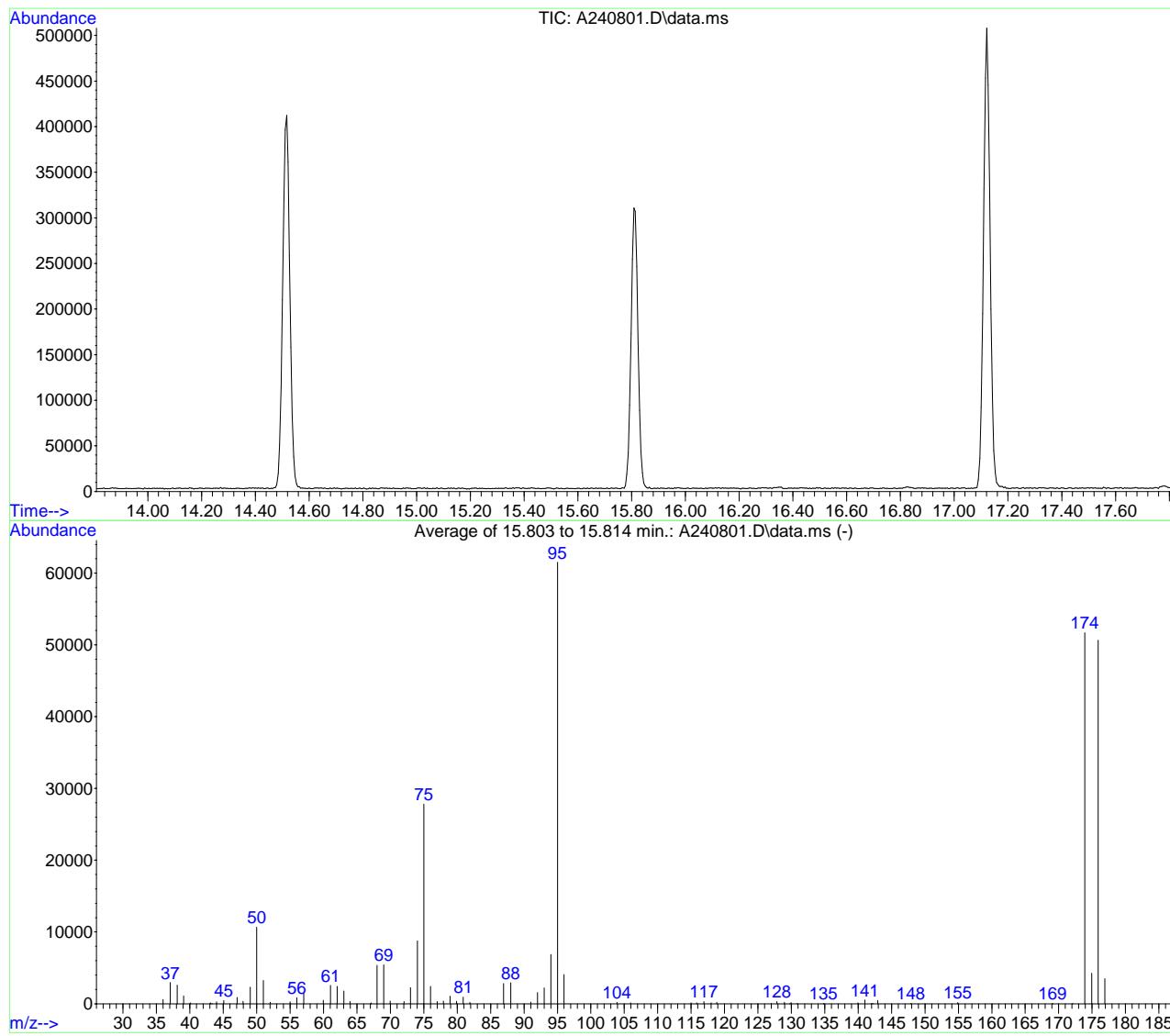
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.10	9878	127.95	314	155.00	153		
95.10	86885	128.90	74	157.00	206		
96.10	5816	129.95	262	159.00	51		
97.10	267	130.95	129	171.95	387		
103.95	324	134.95	116	174.00	84853		
105.95	363	136.90	78	175.00	6977		
107.00	56	141.00	869	176.00	83624		
115.95	276	142.95	866	177.00	5539		
116.95	494	145.90	60	177.95	146		
118.00	287	147.95	226				
118.95	430	154.80	52				

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9165\A240801.D Vial: 1
 Acq On : 3 Apr 2018 5:23 pm Operator: JessicaP
 Sample : bfb Inst : MSA
 Misc : MS25128,VA9165,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2297, 2298, 2299; Background Corrected with Scan 2288

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	10680	PASS
75	95	30	60	45.2	27821	PASS
95	95	100	100	100.0	61501	PASS
96	95	5	9	6.6	4068	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	84.0	51685	PASS
175	174	5	9	8.3	4265	PASS
176	174	95	101	98.0	50666	PASS
177	176	5	9	6.9	3509	PASS

Average of 15.803 to 15.814 min.: A240801.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	599	49.05	2304	63.95	312	77.95	361
37.05	2955	50.00	10680	67.10	129	78.95	1053
38.10	2600	51.00	3244	68.00	5357	79.90	331
39.05	1108	52.05	185	69.00	5431	80.90	919
40.10	127	55.00	280	69.95	395	81.90	210
43.05	136	56.00	834	72.05	323	86.95	2804
43.30	51	57.05	1454	73.00	2242	88.00	2912
44.00	267	59.95	498	74.05	8748	91.00	237
45.05	449	61.05	2553	75.00	27821	92.00	1567
47.05	896	62.05	2432	76.00	2410	93.00	2195
47.95	350	63.05	1778	77.00	322	94.00	6867

Average of 15.803 to 15.814 min.: A240801.D\data.ms

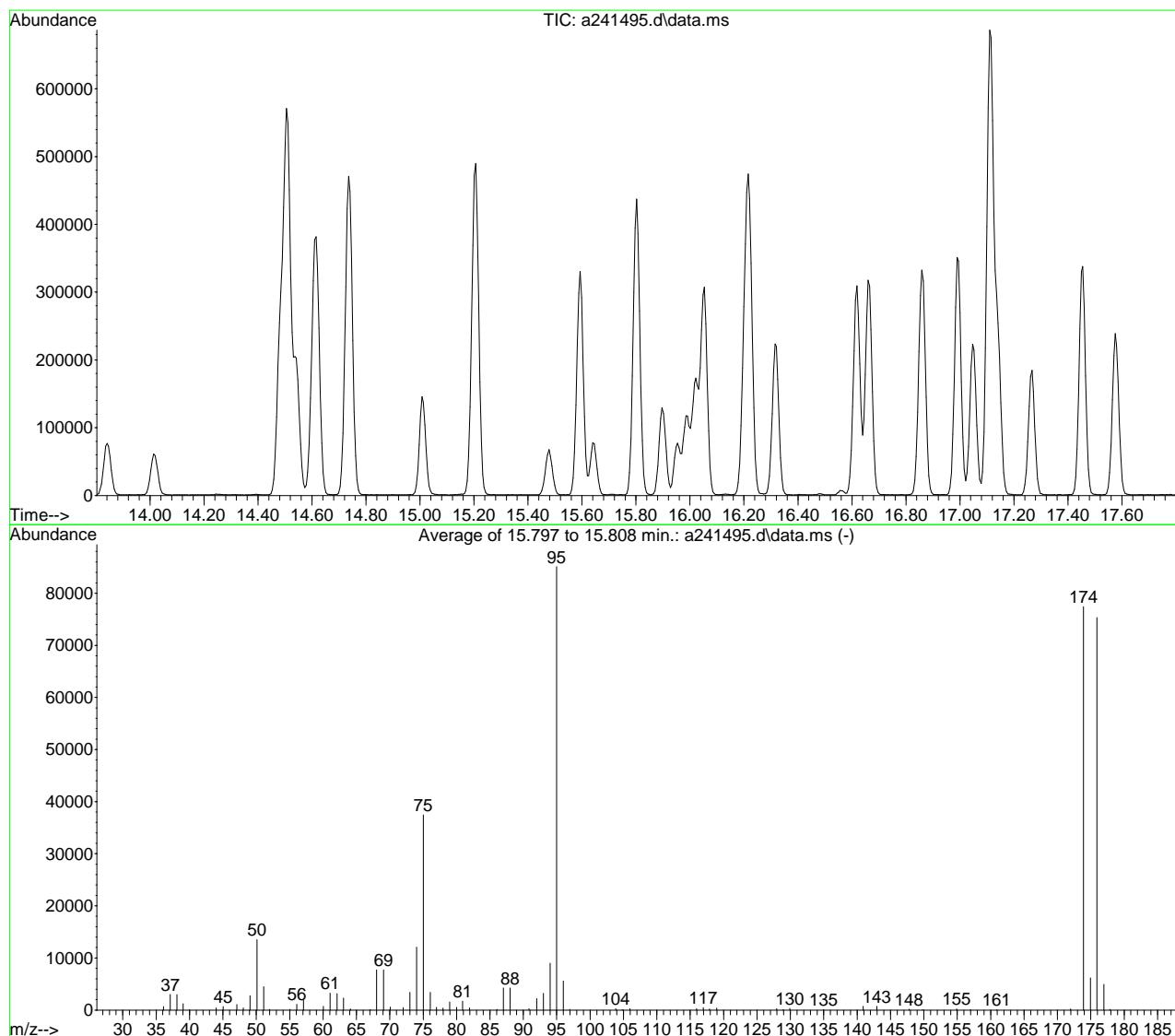
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	61501	128.95	191	154.90	168		
96.00	4068	129.80	62	169.10	53		
103.90	211	129.95	164	172.10	53		
105.95	122	130.90	71	173.90	51685		
115.00	116	134.80	53	174.95	4265		
115.85	130	139.95	112	175.90	50666		
116.90	308	141.00	528	176.90	3509		
118.00	145	142.00	65				
118.85	202	142.20	51				
127.00	54	142.95	453				
127.85	307	147.90	54				

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ja...9-18\va9204\A241495.d Vial: 2
 Acq On : 8 May 2018 6:46 am Operator: jessicap
 Sample : bfb Inst : MSA
 Misc : MS26069,VA9204,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2296, 2297, 2298; Background Corrected with Scan 2287

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	13507	PASS
75	95	30	60	44.0	37472	PASS
95	95	100	100	100.0	85083	PASS
96	95	5	9	6.6	5590	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	91.0	77392	PASS
175	174	5	9	8.0	6183	PASS
176	174	95	101	97.3	75331	PASS
177	176	5	9	6.5	4926	PASS

Average of 15.797 to 15.808 min.: a241495.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	662	51.10	4514	68.00	7722	80.00	531
37.10	3026	52.00	141	69.05	7732	80.90	1737
38.10	2933	55.05	148	70.05	590	81.95	433
39.05	1196	56.05	1100	72.00	465	86.05	126
40.00	28	57.05	1843	73.00	3422	87.00	4235
44.00	429	60.05	702	74.00	12060	88.00	4241
45.05	665	61.05	3239	75.00	37472	90.85	259
47.10	1044	62.10	3164	76.05	3412	92.00	2184
48.05	427	63.05	2296	77.00	517	93.00	3201
49.05	2769	64.10	228	77.95	396	94.00	8997
50.10	13507	67.10	98	78.95	1576	95.00	85083

Average of 15.797 to 15.808 min.: a241495.d\data.ms

bfb

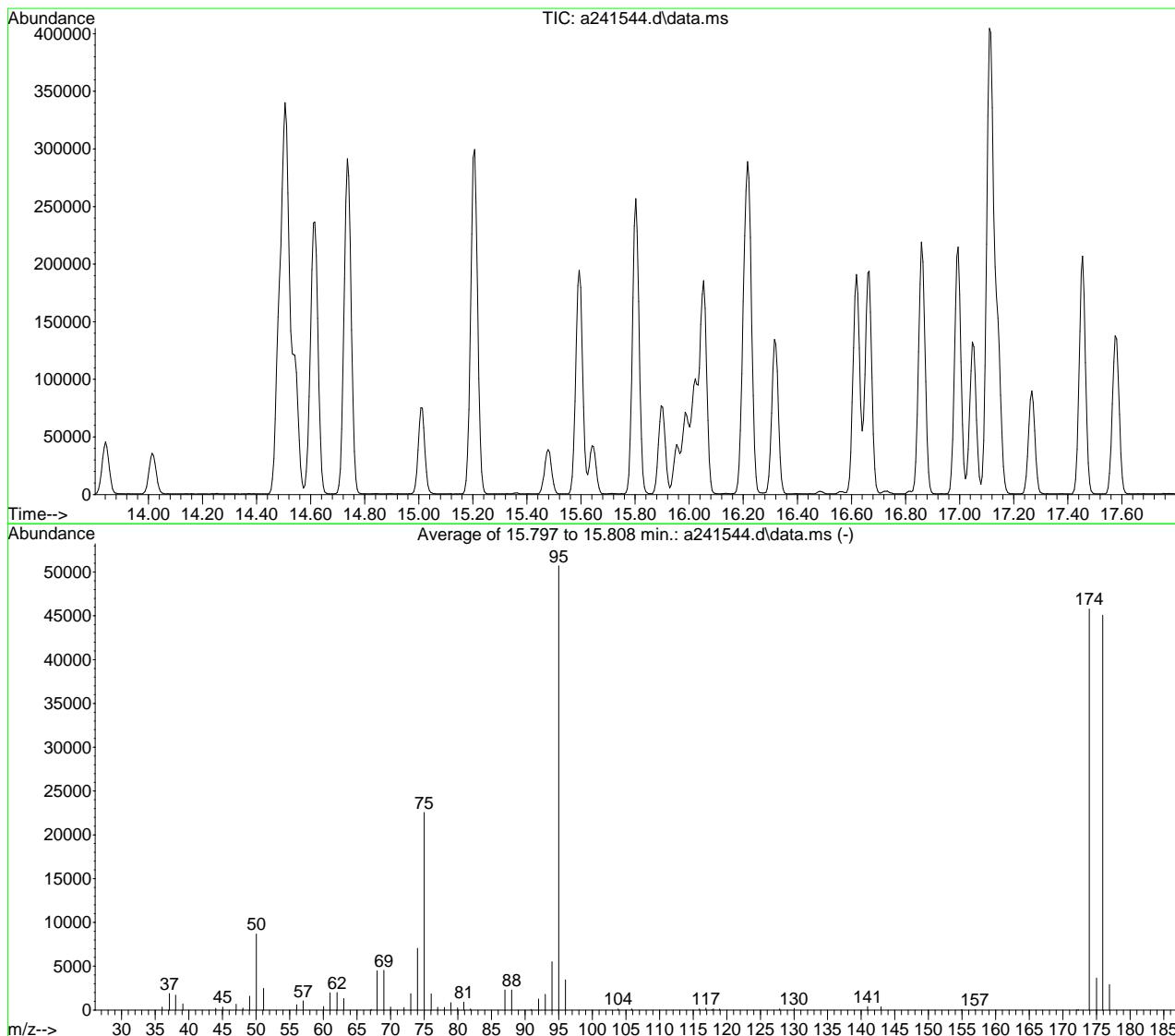
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	5590	129.90	316	174.95	6183		
96.95	150	135.00	55	175.90	75331		
103.85	288	140.90	702	176.95	4926		
104.80	52	142.95	722	177.85	113		
105.95	277	147.80	197				
115.95	294	149.80	64				
116.95	462	154.90	217				
117.90	212	157.00	78				
118.95	387	160.90	50				
127.95	279	171.95	217				
128.90	61	173.90	77392				

SW-846 Method 8260

Data File : C:\msdchem\1\data\kenrickb\va9206\A241544.d Vial: 4
 Acq On : 10 May 2018 8:31 am Operator: oyinadei
 Sample : bfb Inst : MSA
 Misc : MS26175,VA9206,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2296, 2297, 2298; Background Corrected with Scan 2287

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	8686	PASS
75	95	30	60	44.5	22573	PASS
95	95	100	100	100.0	50707	PASS
96	95	5	9	6.8	3456	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	90.3	45787	PASS
175	174	5	9	8.0	3648	PASS
176	174	95	101	98.4	45072	PASS
177	176	5	9	6.5	2908	PASS

Average of 15.797 to 15.808 min.: a241544.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	344	56.05	596	73.00	1867	88.00	2295
37.10	1888	57.00	1053	74.00	7039	90.90	62
38.05	1712	60.05	413	75.00	22573	92.00	1245
39.10	694	61.00	1954	76.05	1854	93.00	1793
44.00	201	62.05	1994	77.00	307	94.00	5512
45.05	345	63.05	1310	78.00	294	95.00	50707
47.05	679	67.10	65	78.95	830	96.00	3456
48.05	226	68.00	4474	79.95	257	103.85	130
49.05	1592	69.00	4537	80.90	893	105.85	126
50.05	8686	70.00	337	81.90	131	115.95	124
51.10	2466	72.00	276	87.00	2287	116.90	236

Average of 15.797 to 15.808 min.: a241544.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
117.80	54	173.90	45787				
118.00	137	175.00	3648				
118.95	126	175.90	45072				
127.85	134	176.90	2908				
130.00	182						
140.95	397						
142.95	379						
154.90	54						
156.90	57						
172.10	54						
172.30	52						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49936.D
 Acq On : 20 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic1992-0.5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:30:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:29:57 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	274289	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	360285	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	537225	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	446758	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	201788	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	178591	49.00	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	=	98.00%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	188905	50.81	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	=	101.62%	
77) toluene-d8 (s)	4.956	98	580950	50.93	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	=	101.86%	
100) 4-bromofluorobenzene (s)	7.232	95	207406	51.18	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	=	102.36%	
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	4840	57.65	ug/L	93
3) tertiary butyl alcohol	2.314	59	2231	2.92	ug/L	72
6) chlorodifluoromethane	1.139	51	3166	0.57	ug/L	98
7) dichlorodifluoromethane	1.129	85	3516	0.51	ug/L	98
11) vinyl chloride	1.302	62	3378	0.56	ug/L	98
14) trichlorofluoromethane	1.700	101	3916	0.52	ug/L	98
15) vinyl bromide	1.664	106	2343	0.58	ug/L	92
17) ethyl ether	1.852	74	1115	0.51	ug/L	92
18) 2-chloropropane	1.921	43	3401	0.54	ug/L	93
19) acrolein	1.931	56	736	0.59	ug/L	83
20) freon 113	1.994	151	1453	0.57	ug/L	# 79
21) 1,1-dichloroethene	1.989	61	3587	0.53	ug/L	87
22) acetone	2.010	58	1169	2.23	ug/L	94
23) acetonitrile	2.167	41	4893	6.02	ug/L	92
25) carbon disulfide	2.125	76	6526	0.65	ug/L	95
26) methylene chloride	2.272	84	2809	0.64	ug/L	87
27) methyl acetate	2.188	43	2550	0.57	ug/L	93
28) methyl tert butyl ether	2.419	73	7045	0.55	ug/L	94
29) trans-1,2-dichloroethene	2.429	96	2310	0.58	ug/L	96
30) hexane	2.592	56	1242	0.50	ug/L	# 75
31) di-isopropyl ether	2.696	45	7881	0.54	ug/L	99
32) ethyl tert-butyl ether	2.922	59	6981	0.51	ug/L	92
33) 1,1-dichloroethane	2.691	63	4557	0.53	ug/L	96
34) chloroprene	2.738	53	3258	0.51	ug/L	98
35) acrylonitrile	2.403	53	1192	0.53	ug/L	92
38) 2-butanone	3.027	72	1479	2.11	ug/L	93
39) 2,2-dichloropropane	3.048	77	3125	0.52	ug/L	96
40) cis-1,2-dichloroethene	3.037	96	2828	0.61	ug/L	91
41) propionitrile	3.069	54	5494	5.15	ug/L	93
43) bromochloromethane	3.184	128	1060	0.48	ug/L	88
45) chloroform	3.247	83	4956	0.58	ug/L	97
47) methacrylonitrile	3.168	67	1157	0.48	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49936.D
 Acq On : 20 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic1992-0.5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:30:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:29:57 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
48) 1,1,1-trichloroethane	3.368	97	3943	0.56	ug/L	# 1
49) cyclohexane	3.415	84	3071	0.60	ug/L	# 85
50) 1,1-dichloropropene	3.467	75	3383	0.54	ug/L	88
51) carbon tetrachloride	3.462	119	3086	0.54	ug/L	88
52) isobutyl alcohol	3.504	43	1533	4.90	ug/L	95
53) tert-amyl alcohol	3.583	55	679	2.42	ug/L	# 59
56) n-butyl alcohol	3.960	56	4555	20.98	ug/L	90
57) benzene	3.598	78	9701	0.57	ug/L	99
58) tert-amyl methyl ether	3.672	73	7047	0.54	ug/L	95
59) iso-octane	3.672	57	5439	0.51	ug/L	97
60) heptane	3.787	57	1139	0.52	ug/L	# 77
63) trichloroethene	4.049	95	2572	0.55	ug/L	77
64) ethyl acrylate	4.091	55	3583	0.47	ug/L	89
66) 2-chloroethyl vinyl ether	4.626	63	3730	1.22	ug/L	94
67) methyl methacrylate	4.264	69	1740	0.48	ug/L	81
68) 1,2-dichloropropane	4.233	63	2863	0.57	ug/L	90
69) methylcyclohexane	4.217	83	3083	0.49	ug/L	87
70) dibromomethane	4.296	93	1961	0.56	ug/L	91
71) bromodichloromethane	4.416	83	3596	0.54	ug/L	94
72) epichlorohydrin	4.663	57	1423	2.35	ug/L	80
73) cis-1,3-dichloropropene	4.747	75	3917	0.51	ug/L	93
74) 4-methyl-2-pentanone	4.862	58	4646	1.84	ug/L	99
78) toluene	5.014	92	5810	0.60	ug/L	96
79) ethyl methacrylate	5.234	69	2832	0.45	ug/L	91
80) trans-1,3-dichloropropene	5.192	75	3214	0.47	ug/L	89
81) 1,1,2-trichloroethane	5.355	83	2273	0.57	ug/L	94
82) 2-hexanone	5.538	58	4614	1.84	ug/L	# 82
83) tetrachloroethene	5.428	164	1774	0.56	ug/L	96
84) 1,3-dichloropropane	5.491	76	3751	0.57	ug/L	97
85) butyl acetate	5.633	56	1886	0.52	ug/L	86
86) dibromochloromethane	5.664	129	2394	0.48	ug/L	94
87) 1,2-dibromoethane	5.764	107	2778	0.55	ug/L	93
88) n-butyl ether	6.293	57	8888	0.49	ug/L	99
89) chlorobenzene	6.194	112	6056	0.58	ug/L	98
90) 1,1,1,2-tetrachloroethane	6.267	131	1892	0.49	ug/L	92
91) ethylbenzene	6.277	91	9913	0.53	ug/L	94
92) m,p-xylene	6.393	106	7014	1.07	ug/L	87
93) o-xylene	6.739	91	7408	0.51	ug/L	96
94) styrene	6.760	104	5065	0.45	ug/L	97
95) butyl acrylate	6.702	56	1917	0.41	ug/L	# 84
96) bromoform	6.912	173	1492	0.44	ug/L	96
97) isopropylbenzene	7.080	105	8385	0.51	ug/L	96
101) bromobenzene	7.363	156	2311	0.55	ug/L	87
102) 1,1,2,2-tetrachloroethane	7.368	83	3627	0.53	ug/L	96
103) trans-1,4-dichloro-2-b...	7.410	53	684	0.45	ug/L	68
104) 1,2,3-trichloropropane	7.420	110	798	0.56	ug/L	90
105) n-propylbenzene	7.468	91	10301	0.52	ug/L	97
106) 2-chlorotoluene	7.541	126	1938	0.51	ug/L	93
107) 4-chlorotoluene	7.656	126	2181	0.58	ug/L	# 74
109) 1,3,5-trimethylbenzene	7.646	105	6396	0.50	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49936.D
 Acq On : 20 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic1992-0.5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:30:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:29:57 2018
 Response via : Initial Calibration

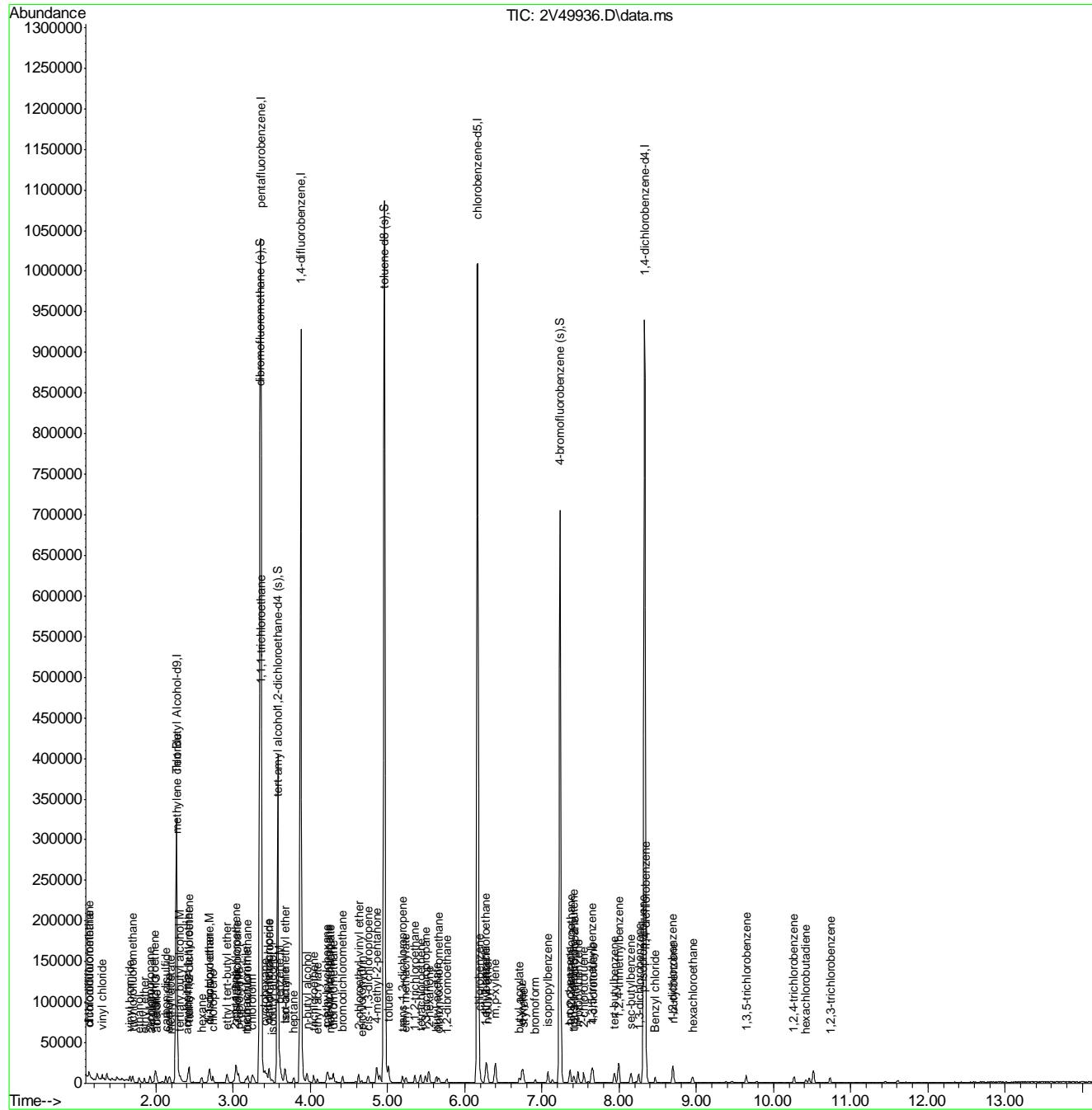
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	7.939	119	5065	0.50	ug/L	97
111) 1,2,4-trimethylbenzene	7.992	105	9593	0.74	ug/L	83
112) sec-butylbenzene	8.154	105	7636	0.48	ug/L	94
113) 1,3-dichlorobenzene	8.254	146	3901	0.54	ug/L	98
114) p-isopropyltoluene	8.307	119	6107	0.49	ug/L	99
115) 1,4-dichlorobenzene	8.348	146	4081	0.55	ug/L	91
116) 1,2-dichlorobenzene	8.694	146	3836	0.53	ug/L	98
118) n-butylbenzene	8.700	92	3164	0.46	ug/L	95
121) 1,3,5-trichlorobenzene	9.649	180	2425	0.49	ug/L	90
122) 1,2,4-trichlorobenzene	10.262	180	2016	0.45	ug/L	94
123) hexachlorobutadiene	10.419	225	786	0.50	ug/L	95
125) 1,2,3-trichlorobenzene	10.739	180	1999	0.47	ug/L	77
126) hexachloroethane	8.951	201	827	0.41	ug/L	87
127) Benzyl chloride	8.469	91	4401	0.48	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49936.D
 Acq On : 20 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic1992-0.5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:30:57 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:29:57 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49937.D
 Acq On : 20 Apr 2018 10:10 pm
 Operator : JessicaP
 Sample : ic1992-1
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 23 10:32:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:32:07 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	283769	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	353297	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	529329	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	447774	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	205064	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	181336	51.25	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 102.50%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	190684	51.63	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 103.26%		
77) toluene-d8 (s)	4.961	98	575553	49.88	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 99.76%		
100) 4-bromofluorobenzene (s)	7.232	95	208894	50.13	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 100.26%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	9530	101.92	ug/L	98
3) tertiary butyl alcohol	2.314	59	4190	4.89	ug/L	84
4) 1,4-dioxane	4.280	88	2176	28.68	ug/L	83
6) chlorodifluoromethane	1.139	51	5849	1.01	ug/L	97
7) dichlorodifluoromethane	1.129	85	7210	1.06	ug/L	91
10) chloromethane	1.239	50	8190	1.12	ug/L	96
11) vinyl chloride	1.307	62	6469	1.03	ug/L	95
13) chloroethane	1.559	64	2945	1.36	ug/L	95
14) trichlorofluoromethane	1.700	101	8061	1.07	ug/L	93
15) vinyl bromide	1.663	106	4370	1.02	ug/L	97
17) ethyl ether	1.852	74	2411	1.12	ug/L	93
18) 2-chloropropane	1.920	43	7037	1.10	ug/L	94
19) acrolein	1.931	56	1418	1.07	ug/L	83
20) freon 113	1.994	151	2516	0.94	ug/L	93
21) 1,1-dichloroethene	1.994	61	6808	0.99	ug/L	91
22) acetone	2.009	58	2354	4.33	ug/L	82
23) acetonitrile	2.167	41	9291	10.58	ug/L	98
25) carbon disulfide	2.125	76	10898	0.96	ug/L	95
26) methylene chloride	2.272	84	4931	1.00	ug/L	87
27) methyl acetate	2.182	43	4887	1.04	ug/L	99
28) methyl tert butyl ether	2.424	73	13343	1.01	ug/L	97
29) trans-1,2-dichloroethene	2.429	96	4378	1.04	ug/L	95
30) hexane	2.591	56	2329	0.96	ug/L	92
31) di-isopropyl ether	2.702	45	14820	0.99	ug/L	94
32) ethyl tert-butyl ether	2.922	59	14036	1.03	ug/L	94
33) 1,1-dichloroethane	2.691	63	8850	1.02	ug/L	98
34) chloroprene	2.738	53	5914	0.94	ug/L	95
35) acrylonitrile	2.403	53	2300	1.02	ug/L	98
36) vinyl acetate	2.681	86	610	0.89	ug/L	60
37) ethyl acetate	3.042	45	1075	1.03	ug/L	75
38) 2-butanone	3.021	72	2711	3.84	ug/L	70
39) 2,2-dichloropropane	3.048	77	6156	1.03	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49937.D
 Acq On : 20 Apr 2018 10:10 pm
 Operator : JessicaP
 Sample : ic1992-1
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 23 10:32:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:32:07 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) cis-1,2-dichloroethene	3.042	96	4668	0.92	ug/L	96
41) propionitrile	3.069	54	10722	10.10	ug/L	92
42) methyl acrylate	3.074	85	846	0.91	ug/L	# 42
43) bromochloromethane	3.189	128	1967	0.93	ug/L	92
44) tetrahydrofuran	3.200	71	915	1.12	ug/L	# 81
45) chloroform	3.247	83	9364	1.04	ug/L	96
47) methacrylonitrile	3.163	67	2179	0.95	ug/L	96
48) 1,1,1-trichloroethane	3.367	97	7245	0.99	ug/L	# 1
49) cyclohexane	3.409	84	4764	0.86	ug/L	# 82
50) 1,1-dichloropropene	3.462	75	6831	1.07	ug/L	98
51) carbon tetrachloride	3.467	119	5835	1.01	ug/L	89
52) isobutyl alcohol	3.504	43	2975	9.80	ug/L	94
53) tert-amyl alcohol	3.588	55	1403	5.18	ug/L	# 60
56) n-butyl alcohol	3.955	56	9133	46.43	ug/L	97
57) benzene	3.598	78	18393	1.02	ug/L	97
58) tert-amyl methyl ether	3.671	73	12986	0.97	ug/L	97
59) iso-octane	3.671	57	10664	1.00	ug/L	95
60) heptane	3.787	57	2161	0.98	ug/L	97
61) isopropyl acetate	3.609	87	930	1.04	ug/L	# 69
62) 1,2-dichloroethane	3.630	62	8010	1.26	ug/L	98
63) trichloroethene	4.044	95	5120	1.06	ug/L	84
64) ethyl acrylate	4.091	55	7088	0.98	ug/L	96
65) 2-nitropropane	4.579	43	1496	1.03	ug/L	84
66) 2-chloroethyl vinyl ether	4.626	63	8037	3.58	ug/L	94
67) methyl methacrylate	4.259	69	3412	0.97	ug/L	86
68) 1,2-dichloropropane	4.232	63	5092	0.96	ug/L	95
69) methylcyclohexane	4.217	83	5735	0.94	ug/L	95
70) dibromomethane	4.290	93	3917	1.07	ug/L	96
71) bromodichloromethane	4.416	83	6487	0.95	ug/L	90
72) epichlorohydrin	4.662	57	2831	4.89	ug/L	98
73) cis-1,3-dichloropropene	4.746	75	7354	0.96	ug/L	89
74) 4-methyl-2-pentanone	4.862	58	9142	3.82	ug/L	94
78) toluene	5.014	92	10453	0.98	ug/L	97
79) ethyl methacrylate	5.239	69	5481	0.92	ug/L	98
80) trans-1,3-dichloropropene	5.192	75	6538	0.99	ug/L	94
81) 1,1,2-trichloroethane	5.354	83	4211	0.98	ug/L	96
82) 2-hexanone	5.533	58	8779	3.64	ug/L	89
83) tetrachloroethene	5.428	164	3286	0.98	ug/L	94
84) 1,3-dichloropropane	5.491	76	6888	0.97	ug/L	94
85) butyl acetate	5.632	56	3473	0.93	ug/L	94
86) dibromochloromethane	5.664	129	4866	1.00	ug/L	87
87) 1,2-dibromoethane	5.769	107	5141	0.96	ug/L	94
88) n-butyl ether	6.293	57	17316	0.96	ug/L	98
89) chlorobenzene	6.188	112	11165	0.99	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	3740	0.97	ug/L	94
91) ethylbenzene	6.277	91	18247	0.95	ug/L	98
92) m,p-xylene	6.393	106	13277	1.95	ug/L	93
93) o-xylene	6.739	91	14611	1.00	ug/L	94
94) styrene	6.760	104	10461	0.98	ug/L	98
95) butyl acrylate	6.707	56	3644	0.85	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49937.D
 Acq On : 20 Apr 2018 10:10 pm
 Operator : JessicaP
 Sample : ic1992-1
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 23 10:32:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:32:07 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) bromoform	6.912	173	2944	0.92	ug/L	90
97) isopropylbenzene	7.079	105	16042	0.96	ug/L	96
101) bromobenzene	7.363	156	4588	1.03	ug/L	86
102) 1,1,2,2-tetrachloroethane	7.368	83	6847	0.96	ug/L	92
103) trans-1,4-dichloro-2-b...	7.410	53	1393	0.95	ug/L	72
104) 1,2,3-trichloropropane	7.415	110	1461	0.95	ug/L	89
105) n-propylbenzene	7.467	91	19615	0.95	ug/L	100
106) 2-chlorotoluene	7.541	126	3687	0.95	ug/L	91
107) 4-chlorotoluene	7.661	126	4095	0.99	ug/L	91
109) 1,3,5-trimethylbenzene	7.646	105	12144	0.93	ug/L	93
110) tert-butylbenzene	7.939	119	9902	0.96	ug/L	89
111) 1,2,4-trimethylbenzene	7.992	105	14964	0.92	ug/L	89
112) sec-butylbenzene	8.154	105	14529	0.92	ug/L	98
113) 1,3-dichlorobenzene	8.254	146	7442	0.97	ug/L	92
114) p-isopropyltoluene	8.306	119	10967	0.87	ug/L	91
115) 1,4-dichlorobenzene	8.354	146	7725	0.98	ug/L	93
116) 1,2-dichlorobenzene	8.694	146	7123	0.94	ug/L	94
118) n-butylbenzene	8.700	92	6035	0.90	ug/L	98
120) 1,2-dibromo-3-chloropr...	9.465	157	948	0.75	ug/L	91
121) 1,3,5-trichlorobenzene	9.649	180	4408	0.89	ug/L	93
122) 1,2,4-trichlorobenzene	10.267	180	4154	0.96	ug/L	97
123) hexachlorobutadiene	10.419	225	1558	0.97	ug/L	88
124) naphthalene	10.519	128	14398	0.98	ug/L	97
125) 1,2,3-trichlorobenzene	10.734	180	3592	0.86	ug/L	93
126) hexachloroethane	8.951	201	1585	0.85	ug/L	92
127) Benzyl chloride	8.469	91	7765	0.85	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
Data File : 2V49937.D
Acq On : 20 Apr 2018 10:10 pm
Operator : JessicaP
Sample : icl1992-1
Misc : MS25736,V2V1992,5,,,1
ALS Vial : 3 Sample Multiplier: 1

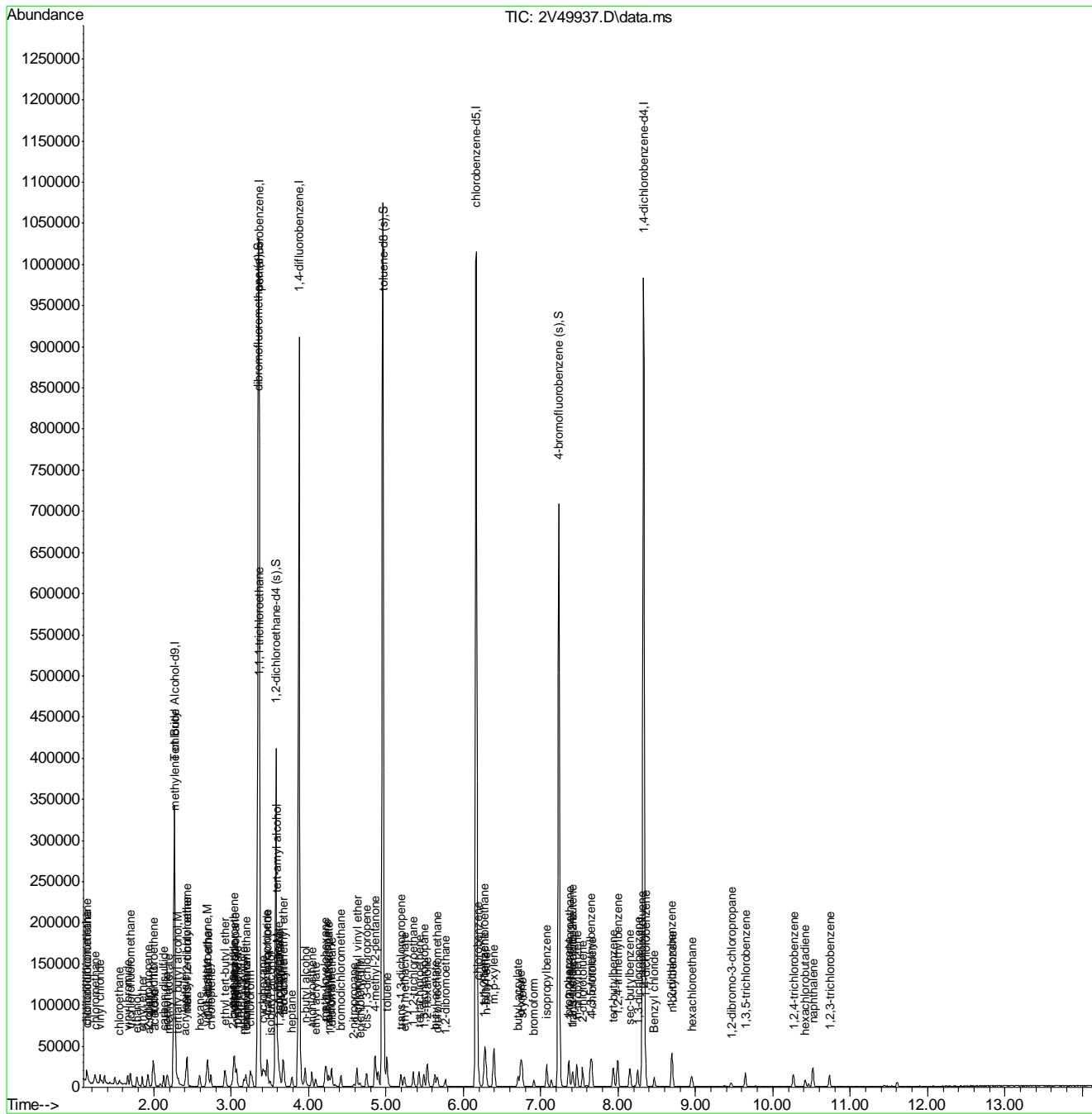
Quant Time: Apr 23 10:32:50 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M

Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um

QLast Update : Mon Apr 23 10:32:07 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49938.D
 Acq On : 20 Apr 2018 10:35 pm
 Operator : JessicaP
 Sample : ic1992-2
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 10:34:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	276128	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	357676	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	539440	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	441044	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	199007	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	176840	48.96	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery = 97.92%			
55) 1,2-dichloroethane-d4 (s)	3.577	65	182776	48.04	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery = 96.08%			
77) toluene-d8 (s)	4.956	98	585285	51.54	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery = 103.08%			
100) 4-bromofluorobenzene (s)	7.232	95	205343	50.74	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery = 101.48%			
Target Compounds						
				Qvalue		
2) ethanol	1.779	45	18879	206.17	ug/L	98
3) tertiary butyl alcohol	2.314	59	8332	10.07	ug/L	88
4) 1,4-dioxane	4.275	88	4096	51.68	ug/L	91
6) chlorodifluoromethane	1.139	51	11865	2.01	ug/L	96
7) dichlorodifluoromethane	1.129	85	14117	2.01	ug/L	98
10) chloromethane	1.239	50	15923	2.03	ug/L	98
11) vinyl chloride	1.302	62	13012	2.03	ug/L	96
12) bromomethane	1.496	94	6047	3.11	ug/L	89
13) chloroethane	1.559	64	5776	2.23	ug/L	94
14) trichlorofluoromethane	1.695	101	16261	2.08	ug/L	96
15) vinyl bromide	1.664	106	8437	1.94	ug/L	96
17) ethyl ether	1.852	74	4622	2.04	ug/L	91
18) 2-chloropropane	1.921	43	13719	2.05	ug/L	96
19) acrolein	1.931	56	2716	1.98	ug/L	93
20) freon 113	1.994	151	5494	2.07	ug/L	94
21) 1,1-dichloroethene	1.994	61	14270	2.06	ug/L	100
22) acetone	2.010	58	4244	7.51	ug/L	93
23) acetonitrile	2.167	41	17297	19.08	ug/L	95
24) iodomethane	2.083	142	3537	1.40	ug/L	96
25) carbon disulfide	2.125	76	21379	1.89	ug/L	99
26) methylene chloride	2.272	84	10274	2.06	ug/L	91
27) methyl acetate	2.183	43	9659	2.00	ug/L	97
28) methyl tert butyl ether	2.424	73	25660	1.91	ug/L	99
29) trans-1,2-dichloroethene	2.429	96	8405	1.94	ug/L	94
30) hexane	2.592	56	5217	2.15	ug/L	96
31) di-isopropyl ether	2.702	45	29552	1.96	ug/L	91
32) ethyl tert-butyl ether	2.922	59	27206	1.95	ug/L	99
33) 1,1-dichloroethane	2.691	63	18205	2.06	ug/L	97
34) chloroprene	2.733	53	12706	2.03	ug/L	97
35) acrylonitrile	2.403	53	4539	1.97	ug/L	98
36) vinyl acetate	2.681	86	1254	1.91	ug/L #	71
37) ethyl acetate	3.043	45	2195	2.05	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49938.D
 Acq On : 20 Apr 2018 10:35 pm
 Operator : JessicaP
 Sample : ic1992-2
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 10:34:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	5353	7.59	ug/L	95
39) 2,2-dichloropropane	3.048	77	12709	2.07	ug/L	93
40) cis-1,2-dichloroethene	3.037	96	9791	1.96	ug/L	97
41) propionitrile	3.069	54	22105	20.50	ug/L	95
42) methyl acrylate	3.074	85	1862	2.07	ug/L	# 58
43) bromochloromethane	3.189	128	4462	2.13	ug/L	86
44) tetrahydrofuran	3.200	71	1600	1.82	ug/L	88
45) chloroform	3.247	83	18034	1.95	ug/L	100
47) methacrylonitrile	3.163	67	4658	2.03	ug/L	89
48) 1,1,1-trichloroethane	3.362	97	14613	1.98	ug/L	# 1
49) cyclohexane	3.410	84	10412	1.95	ug/L	95
50) 1,1-dichloropropene	3.467	75	13540	2.04	ug/L	94
51) carbon tetrachloride	3.462	119	11709	1.99	ug/L	99
52) isobutyl alcohol	3.504	43	5766	18.88	ug/L	98
53) tert-amyl alcohol	3.583	55	2913	10.50	ug/L	88
56) n-butyl alcohol	3.955	56	18792	96.03	ug/L	92
57) benzene	3.598	78	36259	1.96	ug/L	99
58) tert-amyl methyl ether	3.677	73	26262	1.94	ug/L	96
59) iso-octane	3.672	57	22343	2.06	ug/L	97
60) heptane	3.782	57	4629	2.07	ug/L	95
61) isopropyl acetate	3.609	87	1854	1.99	ug/L	# 69
62) 1,2-dichloroethane	3.624	62	14423	1.97	ug/L	98
63) trichloroethene	4.044	95	10035	2.00	ug/L	97
64) ethyl acrylate	4.091	55	13740	1.87	ug/L	99
65) 2-nitropropane	4.579	43	2602	1.73	ug/L	98
66) 2-chloroethyl vinyl ether	4.626	63	19245	9.29	ug/L	96
67) methyl methacrylate	4.259	69	6675	1.88	ug/L	91
68) 1,2-dichloropropane	4.233	63	10520	1.98	ug/L	94
69) methylcyclohexane	4.217	83	12368	2.03	ug/L	94
70) dibromomethane	4.290	93	7234	1.90	ug/L	87
71) bromodichloromethane	4.416	83	13303	1.94	ug/L	99
72) epichlorohydrin	4.663	57	5665	9.67	ug/L	99
73) cis-1,3-dichloropropene	4.746	75	14543	1.89	ug/L	97
74) 4-methyl-2-pentanone	4.862	58	19200	8.00	ug/L	92
75) 3-methyl-1-butanol	4.904	70	5553	30.52	ug/L	# 77
78) toluene	5.014	92	21099	2.02	ug/L	98
79) ethyl methacrylate	5.239	69	11174	1.95	ug/L	97
80) trans-1,3-dichloropropene	5.192	75	12856	1.98	ug/L	96
81) 1,1,2-trichloroethane	5.355	83	8322	1.98	ug/L	95
82) 2-hexanone	5.533	58	19121	8.30	ug/L	96
83) tetrachloroethene	5.428	164	6856	2.09	ug/L	91
84) 1,3-dichloropropane	5.491	76	13476	1.95	ug/L	97
85) butyl acetate	5.633	56	7198	2.01	ug/L	99
86) dibromochloromethane	5.664	129	9351	1.95	ug/L	94
87) 1,2-dibromoethane	5.764	107	10137	1.95	ug/L	99
88) n-butyl ether	6.293	57	34928	1.99	ug/L	99
89) chlorobenzene	6.188	112	21910	1.98	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	7395	1.97	ug/L	96
91) ethylbenzene	6.277	91	38204	2.05	ug/L	97
92) m,p-xylene	6.398	106	27404	4.12	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49938.D
 Acq On : 20 Apr 2018 10:35 pm
 Operator : JessicaP
 Sample : ic1992-2
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 10:34:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	28646	1.98	ug/L	100
94) styrene	6.760	104	20509	1.96	ug/L	95
95) butyl acrylate	6.707	56	7687	1.92	ug/L	95
96) bromoform	6.912	173	6025	1.96	ug/L	95
97) isopropylbenzene	7.080	105	32925	2.03	ug/L	97
98) cis-1,4-dichloro-2-butene	7.137	88	3048	1.47	ug/L	91
101) bromobenzene	7.358	156	8457	1.93	ug/L	95
102) 1,1,2,2-tetrachloroethane	7.368	83	14584	2.13	ug/L	95
103) trans-1,4-dichloro-2-b...	7.405	53	2760	1.98	ug/L	89
104) 1,2,3-trichloropropane	7.415	110	2903	1.98	ug/L	96
105) n-propylbenzene	7.468	91	40019	2.03	ug/L	95
106) 2-chlorotoluene	7.546	126	8126	2.19	ug/L	90
107) 4-chlorotoluene	7.662	126	7954	1.99	ug/L	99
109) 1,3,5-trimethylbenzene	7.641	105	25237	2.04	ug/L	94
110) tert-butylbenzene	7.934	119	20272	2.05	ug/L	99
111) 1,2,4-trimethylbenzene	7.997	105	27452	1.78	ug/L	98
112) sec-butylbenzene	8.154	105	31054	2.08	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	14922	2.03	ug/L	98
114) p-isopropyltoluene	8.307	119	23650	2.02	ug/L	97
115) 1,4-dichlorobenzene	8.354	146	15671	2.06	ug/L	96
116) 1,2-dichlorobenzene	8.694	146	14007	1.95	ug/L	96
118) n-butylbenzene	8.700	92	11976	1.91	ug/L	96
120) 1,2-dibromo-3-chloropr...	9.455	157	2162	2.01	ug/L	86
121) 1,3,5-trichlorobenzene	9.643	180	9155	1.97	ug/L	95
122) 1,2,4-trichlorobenzene	10.267	180	7822	1.89	ug/L	95
123) hexachlorobutadiene	10.419	225	3210	2.08	ug/L	89
124) naphthalene	10.514	128	25765	1.83	ug/L	98
125) 1,2,3-trichlorobenzene	10.734	180	7676	1.98	ug/L	92
126) hexachloroethane	8.951	201	3752	2.18	ug/L	92
127) Benzyl chloride	8.464	91	15694	1.86	ug/L	95
129) 2-methylnaphthalene	11.610	142	4256	0.71	ug/L	97

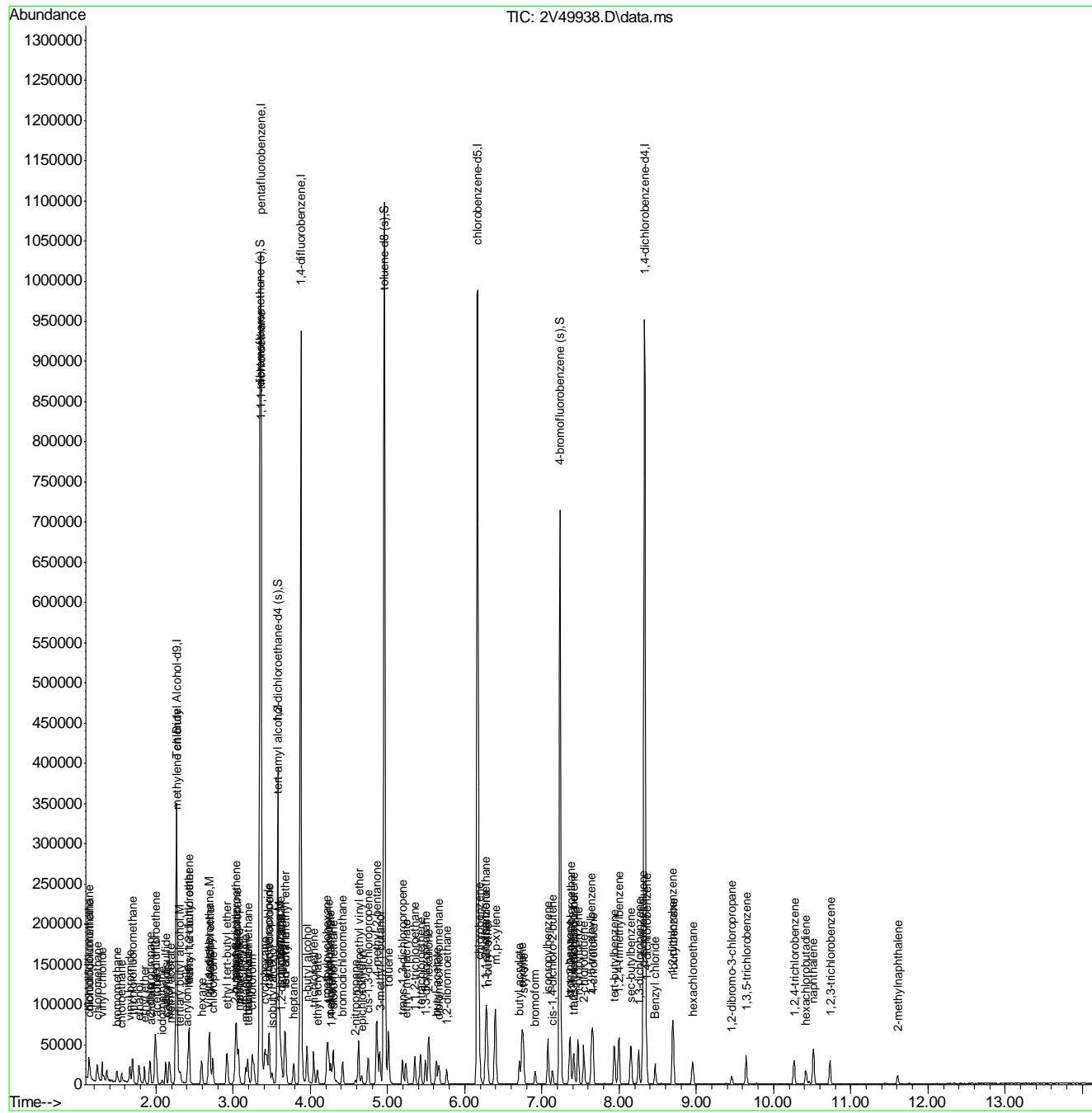
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49938.D
 Acq On : 20 Apr 2018 10:35 pm
 Operator : JessicaP
 Sample : ic1992-2
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 10:34:58 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49939.D
 Acq On : 20 Apr 2018 11:01 pm
 Operator : JessicaP
 Sample : ic1992-5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 23 10:35:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	290509	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	370620	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	561651	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	466676	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	211423	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	183864	49.38	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 98.76%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	192304	49.03	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 98.06%		
77) toluene-d8 (s)	4.956	98	604618	49.93	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 99.86%		
100) 4-bromofluorobenzene (s)	7.232	95	215328	49.90	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 99.80%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	46755	481.61	ug/L	97
3) tertiary butyl alcohol	2.314	59	21296	24.42	ug/L	93
4) 1,4-dioxane	4.280	88	9895	117.35	ug/L	100
6) chlorodifluoromethane	1.139	51	29097	4.76	ug/L	96
7) dichlorodifluoromethane	1.129	85	35742	4.90	ug/L	99
10) chloromethane	1.239	50	38594	4.72	ug/L	97
11) vinyl chloride	1.302	62	30584	4.59	ug/L	97
12) bromomethane	1.496	94	13774	5.35	ug/L	97
13) chloroethane	1.553	64	13467	4.84	ug/L	96
14) trichlorofluoromethane	1.700	101	39208	4.80	ug/L	100
15) vinyl bromide	1.663	106	20797	4.64	ug/L	99
17) ethyl ether	1.852	74	11103	4.70	ug/L	96
18) 2-chloropropane	1.920	43	33956	4.87	ug/L	100
19) acrolein	1.931	56	6195	4.36	ug/L	95
20) freon 113	1.994	151	14170	5.11	ug/L	97
21) 1,1-dichloroethene	1.994	61	36458	5.04	ug/L	99
22) acetone	2.009	58	10694	18.54	ug/L	100
23) acetonitrile	2.167	41	41992	45.23	ug/L	99
24) iodomethane	2.083	142	9055	4.08	ug/L	96
25) carbon disulfide	2.125	76	54767	4.73	ug/L	99
26) methylene chloride	2.272	84	24167	4.65	ug/L	95
27) methyl acetate	2.182	43	23782	4.75	ug/L	97
28) methyl tert butyl ether	2.424	73	66341	4.82	ug/L	99
29) trans-1,2-dichloroethene	2.429	96	21353	4.80	ug/L	99
30) hexane	2.591	56	13039	5.08	ug/L	93
31) di-isopropyl ether	2.702	45	75660	4.87	ug/L	92
32) ethyl tert-butyl ether	2.922	59	69128	4.82	ug/L	98
33) 1,1-dichloroethane	2.691	63	45417	4.92	ug/L	100
34) chloroprene	2.733	53	32025	4.92	ug/L	99
35) acrylonitrile	2.403	53	11283	4.74	ug/L	94
36) vinyl acetate	2.681	86	3517	5.25	ug/L #	86
37) ethyl acetate	3.042	45	5393	4.82	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49939.D
 Acq On : 20 Apr 2018 11:01 pm
 Operator : JessicaP
 Sample : ic1992-5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 23 10:35:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	14062	19.48	ug/L	99
39) 2,2-dichloropropane	3.048	77	31547	4.92	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	24486	4.76	ug/L	97
41) propionitrile	3.063	54	54496	48.47	ug/L	72
42) methyl acrylate	3.079	85	4598	4.87	ug/L	# 56
43) bromochloromethane	3.189	128	11003	4.99	ug/L	87
44) tetrahydrofuran	3.200	71	4239	4.80	ug/L	93
45) chloroform	3.247	83	43875	4.61	ug/L	96
47) methacrylonitrile	3.163	67	11656	4.89	ug/L	92
48) 1,1,1-trichloroethane	3.362	97	35904	4.71	ug/L	# 1
49) cyclohexane	3.409	84	27149	4.94	ug/L	98
50) 1,1-dichloropropene	3.462	75	33785	4.89	ug/L	98
51) carbon tetrachloride	3.467	119	29784	4.89	ug/L	97
52) isobutyl alcohol	3.504	43	14316	45.89	ug/L	97
53) tert-amyl alcohol	3.588	55	7442	25.57	ug/L	# 72
56) n-butyl alcohol	3.955	56	50104	248.37	ug/L	97
57) benzene	3.598	78	91788	4.80	ug/L	99
58) tert-amyl methyl ether	3.677	73	66917	4.78	ug/L	98
59) iso-octane	3.671	57	57607	5.06	ug/L	97
60) heptane	3.782	57	11954	5.09	ug/L	88
61) isopropyl acetate	3.609	87	4533	4.69	ug/L	# 83
62) 1,2-dichloroethane	3.630	62	35156	4.63	ug/L	97
63) trichloroethene	4.044	95	24524	4.70	ug/L	98
64) ethyl acrylate	4.091	55	36075	4.80	ug/L	98
65) 2-nitropropane	4.584	43	6395	4.28	ug/L	94
66) 2-chloroethyl vinyl ether	4.626	63	57333	27.05	ug/L	98
67) methyl methacrylate	4.259	69	17412	4.78	ug/L	98
68) 1,2-dichloropropane	4.232	63	26296	4.76	ug/L	99
69) methylcyclohexane	4.217	83	33358	5.23	ug/L	97
70) dibromomethane	4.295	93	18321	4.68	ug/L	94
71) bromodichloromethane	4.416	83	33942	4.79	ug/L	99
72) epichlorohydrin	4.662	57	14632	24.20	ug/L	95
73) cis-1,3-dichloropropene	4.746	75	37880	4.80	ug/L	98
74) 4-methyl-2-pentanone	4.862	58	49533	19.82	ug/L	94
75) 3-methyl-1-butanol	4.898	70	15377	92.08	ug/L	95
78) toluene	5.014	92	53988	4.87	ug/L	98
79) ethyl methacrylate	5.239	69	30224	5.02	ug/L	97
80) trans-1,3-dichloropropene	5.197	75	33869	4.94	ug/L	96
81) 1,1,2-trichloroethane	5.354	83	20759	4.69	ug/L	91
82) 2-hexanone	5.533	58	49197	19.99	ug/L	98
83) tetrachloroethene	5.428	164	17027	4.85	ug/L	95
84) 1,3-dichloropropane	5.491	76	34983	4.81	ug/L	99
85) butyl acetate	5.632	56	18108	4.77	ug/L	94
86) dibromochloromethane	5.664	129	24468	4.85	ug/L	97
87) 1,2-dibromoethane	5.769	107	26014	4.77	ug/L	97
88) n-butyl ether	6.293	57	93143	5.03	ug/L	100
89) chlorobenzene	6.188	112	55452	4.75	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	19973	5.05	ug/L	99
91) ethylbenzene	6.277	91	97244	4.90	ug/L	98
92) m,p-xylene	6.398	106	70172	9.90	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49939.D
 Acq On : 20 Apr 2018 11:01 pm
 Operator : JessicaP
 Sample : ic1992-5
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 23 10:35:41 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	75304	4.94	ug/L	97
94) styrene	6.760	104	56013	5.08	ug/L	96
95) butyl acrylate	6.707	56	20950	4.99	ug/L	99
96) bromoform	6.912	173	15597	4.82	ug/L	94
97) isopropylbenzene	7.079	105	85392	4.96	ug/L	97
98) cis-1,4-dichloro-2-butene	7.137	88	8480	4.45	ug/L	98
101) bromobenzene	7.363	156	22491	4.88	ug/L	92
102) 1,1,2,2-tetrachloroethane	7.368	83	34725	4.70	ug/L	98
103) trans-1,4-dichloro-2-b...	7.410	53	7022	4.75	ug/L	94
104) 1,2,3-trichloropropane	7.415	110	7594	4.89	ug/L	96
105) n-propylbenzene	7.467	91	106284	5.06	ug/L	100
106) 2-chlorotoluene	7.541	126	20636	5.11	ug/L	99
107) 4-chlorotoluene	7.661	126	19847	4.67	ug/L	97
109) 1,3,5-trimethylbenzene	7.646	105	65204	4.94	ug/L	97
110) tert-butylbenzene	7.939	119	53558	5.07	ug/L	98
111) 1,2,4-trimethylbenzene	7.997	105	69539	4.37	ug/L	99
112) sec-butylbenzene	8.154	105	82033	5.11	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	37041	4.72	ug/L	97
114) p-isopropyltoluene	8.306	119	64685	5.19	ug/L	98
115) 1,4-dichlorobenzene	8.354	146	39104	4.80	ug/L	98
116) 1,2-dichlorobenzene	8.694	146	36627	4.82	ug/L	99
118) n-butylbenzene	8.700	92	33466	5.08	ug/L	98
120) 1,2-dibromo-3-chloropr...	9.465	157	5299	4.63	ug/L	92
121) 1,3,5-trichlorobenzene	9.649	180	23492	4.78	ug/L	97
122) 1,2,4-trichlorobenzene	10.267	180	21225	4.90	ug/L	96
123) hexachlorobutadiene	10.425	225	7973	4.82	ug/L	97
124) naphthalene	10.519	128	68019	4.67	ug/L	98
125) 1,2,3-trichlorobenzene	10.734	180	20080	4.89	ug/L	95
126) hexachloroethane	8.951	201	9715	5.20	ug/L	94
127) Benzyl chloride	8.469	91	42013	4.78	ug/L	98
128) 2-ethylhexyl acrylate	10.519	70	2094	0.65	ug/L #	75
129) 2-methylnaphthalene	11.609	142	11800	2.17	ug/L	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
Data File : 2V49939.D
Acq On : 20 Apr 2018 11:01 pm
Operator : JessicaP
Sample : ic1992-5
Misc : MS25736,V2V1992,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

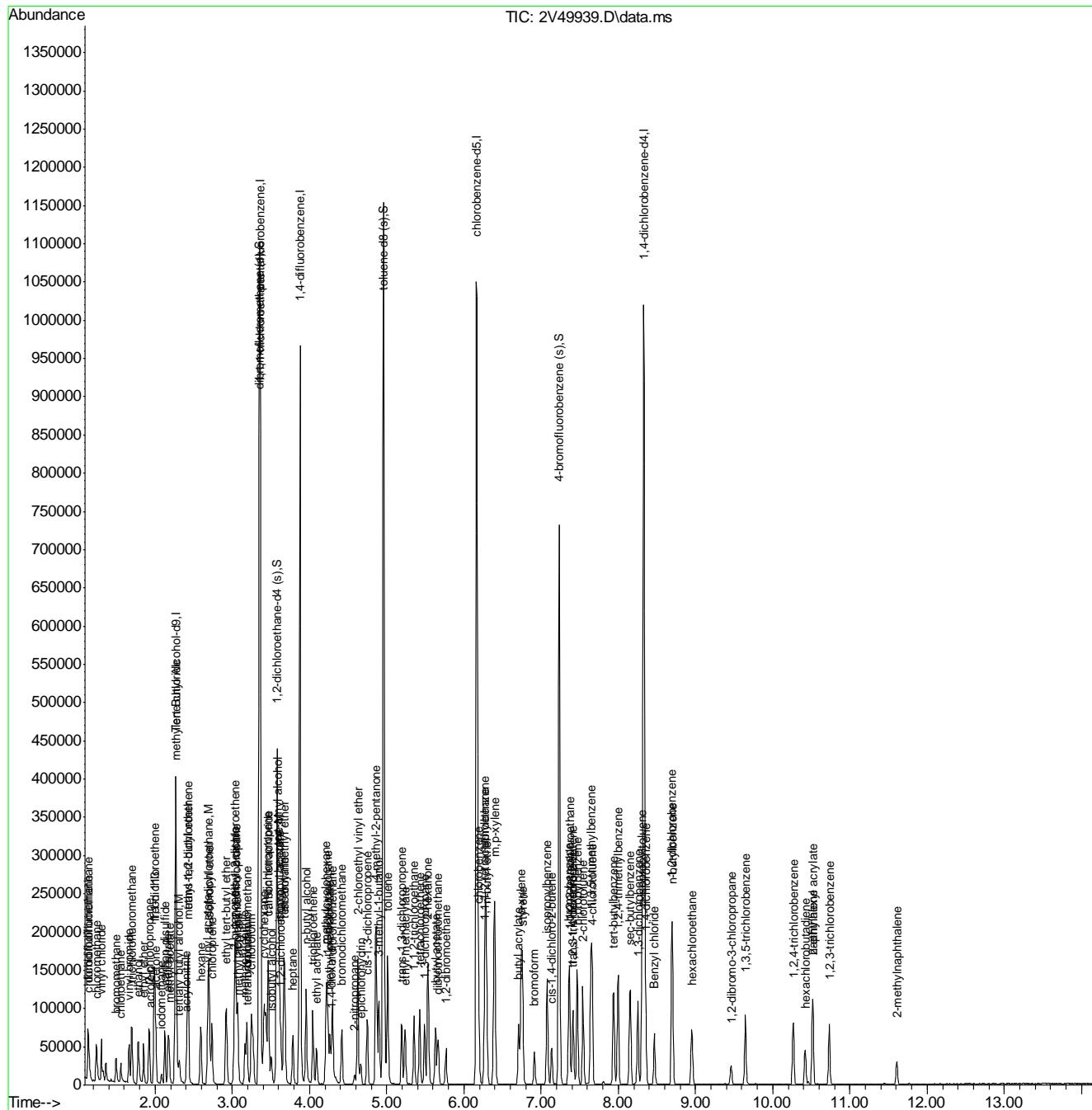
Quant Time: Apr 23 10:35:41 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M

Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)

Last Update : Mon Apr 23 10:34:41 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49940.D
 Acq On : 20 Apr 2018 11:26 pm
 Operator : JessicaP
 Sample : ic1992-10
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 10:36:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	281748	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	350022	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	522148	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	437872	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	200186	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	173631	49.50	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 99.00%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	185370	51.03	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 102.06%		
77) toluene-d8 (s)	4.956	98	572375	50.39	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 100.78%		
100) 4-bromofluorobenzene (s)	7.232	95	206334	50.52	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 101.04%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	93111	996.26	ug/L	99
3) tertiary butyl alcohol	2.314	59	40614	48.25	ug/L	97
4) 1,4-dioxane	4.275	88	19691	244.53	ug/L	100
6) chlorodifluoromethane	1.139	51	56977	9.96	ug/L	97
7) dichlorodifluoromethane	1.129	85	69414	10.12	ug/L	99
10) chloromethane	1.239	50	72981	9.59	ug/L	99
11) vinyl chloride	1.302	62	60963	9.85	ug/L	100
12) bromomethane	1.491	94	24651	9.91	ug/L	98
13) chloroethane	1.553	64	24344	9.34	ug/L	99
14) trichlorofluoromethane	1.695	101	76550	9.99	ug/L	100
15) vinyl bromide	1.664	106	40403	9.69	ug/L	96
17) ethyl ether	1.852	74	22023	9.99	ug/L	96
18) 2-chloropropane	1.920	43	64850	9.89	ug/L	99
19) acrolein	1.931	56	12808	9.80	ug/L	100
20) freon 113	1.994	151	27747	10.54	ug/L	94
21) 1,1-dichloroethene	1.994	61	69302	10.13	ug/L	97
22) acetone	2.010	58	20691	38.55	ug/L	92
23) acetonitrile	2.167	41	83031	96.54	ug/L	99
24) iodomethane	2.083	142	19022	9.66	ug/L	99
25) carbon disulfide	2.125	76	103827	9.60	ug/L	100
26) methylene chloride	2.272	84	45374	9.37	ug/L	97
27) methyl acetate	2.183	43	46457	9.93	ug/L	98
28) methyl tert butyl ether	2.424	73	129159	10.01	ug/L	99
29) trans-1,2-dichloroethene	2.429	96	41645	9.99	ug/L	95
30) hexane	2.592	56	26447	10.88	ug/L	97
31) di-isopropyl ether	2.702	45	147187	10.08	ug/L	91
32) ethyl tert-butyl ether	2.922	59	136611	10.16	ug/L	97
33) 1,1-dichloroethane	2.691	63	87142	10.03	ug/L	98
34) chloroprene	2.738	53	62874	10.26	ug/L	98
35) acrylonitrile	2.403	53	22139	9.96	ug/L	99
36) vinyl acetate	2.681	86	6956	10.86	ug/L #	84
37) ethyl acetate	3.042	45	10389	9.92	ug/L #	80

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49940.D
 Acq On : 20 Apr 2018 11:26 pm
 Operator : JessicaP
 Sample : ic1992-10
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 10:36:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	27321	40.29	ug/L	97
39) 2,2-dichloropropane	3.048	77	59860	9.92	ug/L	98
40) cis-1,2-dichloroethene	3.037	96	46885	9.75	ug/L	99
41) propionitrile	3.063	54	106427	100.85	ug/L	72
42) methyl acrylate	3.074	85	9325	10.53	ug/L	# 93
43) bromochloromethane	3.189	128	21884	10.51	ug/L	94
44) tetrahydrofuran	3.200	71	8074	9.78	ug/L	93
45) chloroform	3.247	83	85798	9.69	ug/L	99
47) methacrylonitrile	3.163	67	24026	10.72	ug/L	96
48) 1,1,1-trichloroethane	3.362	97	69868	9.82	ug/L	# 1
49) cyclohexane	3.409	84	53831	10.40	ug/L	98
50) 1,1-dichloropropene	3.467	75	63913	9.84	ug/L	98
51) carbon tetrachloride	3.467	119	58079	10.14	ug/L	100
52) isobutyl alcohol	3.504	43	30936	106.75	ug/L	95
53) tert-amyl alcohol	3.583	55	14827	53.70	ug/L	# 78
56) n-butyl alcohol	3.955	56	101622	542.57	ug/L	99
57) benzene	3.598	78	174869	9.91	ug/L	99
58) tert-amyl methyl ether	3.677	73	131464	10.20	ug/L	100
59) iso-octane	3.672	57	112273	10.59	ug/L	98
60) heptane	3.782	57	23421	10.69	ug/L	97
61) isopropyl acetate	3.609	87	8916	10.07	ug/L	97
62) 1,2-dichloroethane	3.630	62	66210	9.56	ug/L	97
63) trichloroethene	4.044	95	46665	9.73	ug/L	98
64) ethyl acrylate	4.091	55	72980	10.53	ug/L	100
65) 2-nitropropane	4.584	43	13782	10.30	ug/L	97
66) 2-chloroethyl vinyl ether	4.626	63	126354	63.09	ug/L	99
67) methyl methacrylate	4.259	69	35382	10.55	ug/L	98
68) 1,2-dichloropropane	4.233	63	51126	10.06	ug/L	99
69) methylcyclohexane	4.217	83	65019	10.87	ug/L	98
70) dibromomethane	4.290	93	35960	10.00	ug/L	90
71) bromodichloromethane	4.416	83	66426	10.17	ug/L	98
72) epichlorohydrin	4.663	57	29634	53.05	ug/L	97
73) cis-1,3-dichloropropene	4.746	75	74632	10.25	ug/L	96
74) 4-methyl-2-pentanone	4.862	58	99043	42.71	ug/L	97
75) 3-methyl-1-butanol	4.899	70	33173	219.47	ug/L	99
78) toluene	5.014	92	101620	9.82	ug/L	98
79) ethyl methacrylate	5.239	69	60383	10.68	ug/L	99
80) trans-1,3-dichloropropene	5.192	75	67369	10.49	ug/L	99
81) 1,1,2-trichloroethane	5.355	83	41364	10.08	ug/L	98
82) 2-hexanone	5.533	58	100098	43.35	ug/L	96
83) tetrachloroethene	5.428	164	32233	9.84	ug/L	96
84) 1,3-dichloropropane	5.491	76	68968	10.19	ug/L	99
85) butyl acetate	5.633	56	35828	10.16	ug/L	94
86) dibromochloromethane	5.664	129	49656	10.55	ug/L	96
87) 1,2-dibromoethane	5.764	107	51499	10.15	ug/L	98
88) n-butyl ether	6.293	57	183073	10.53	ug/L	99
89) chlorobenzene	6.188	112	108208	9.98	ug/L	100
90) 1,1,1,2-tetrachloroethane	6.267	131	39442	10.60	ug/L	98
91) ethylbenzene	6.277	91	188347	10.16	ug/L	98
92) m,p-xylene	6.398	106	136452	20.56	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49940.D
 Acq On : 20 Apr 2018 11:26 pm
 Operator : JessicaP
 Sample : ic1992-10
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 10:36:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

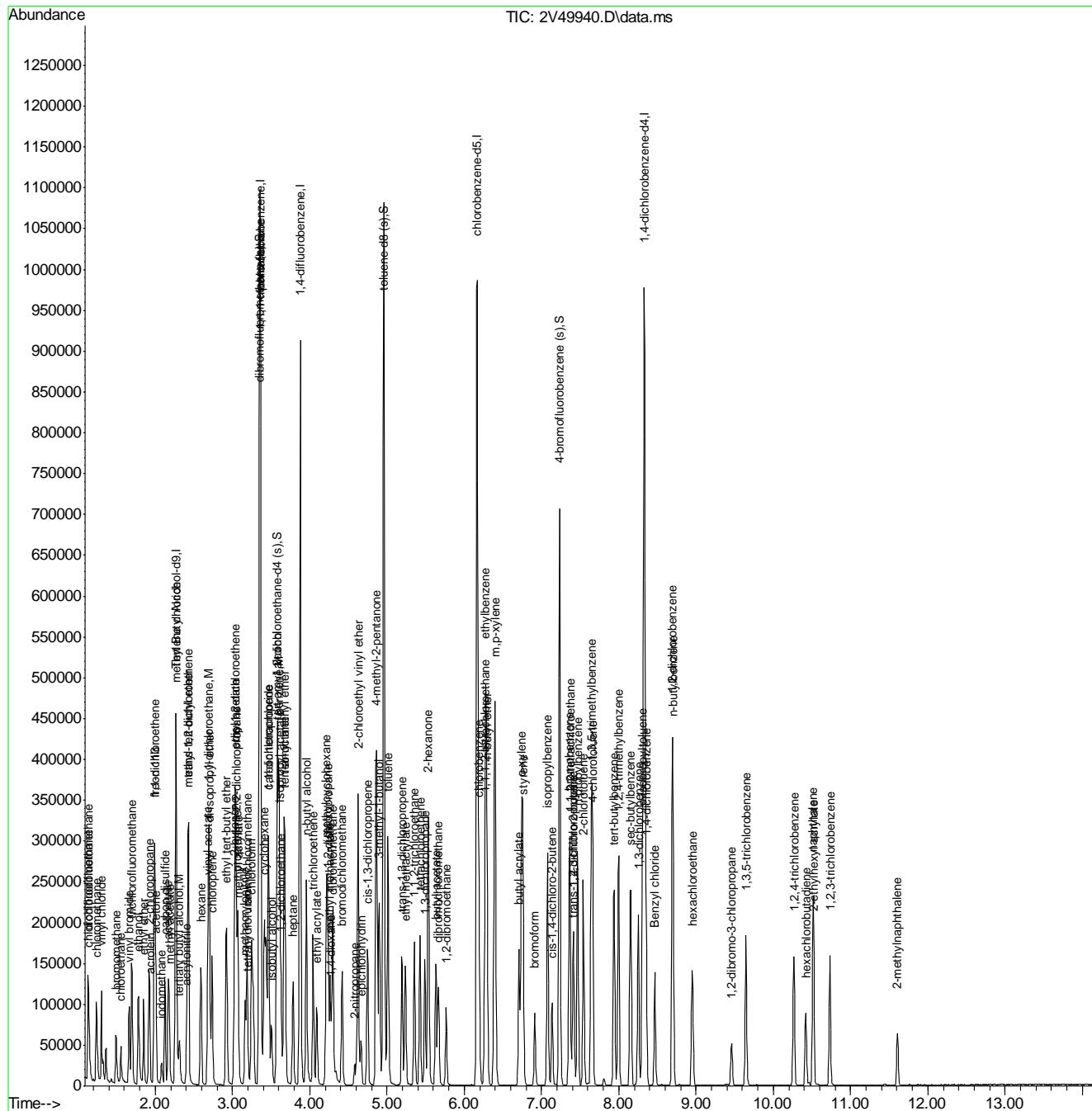
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	148553	10.41	ug/L	97
94) styrene	6.760	104	112967	10.89	ug/L	100
95) butyl acrylate	6.707	56	43384	11.01	ug/L	99
96) bromoform	6.912	173	32024	10.62	ug/L	99
97) isopropylbenzene	7.080	105	164620	10.21	ug/L	98
98) cis-1,4-dichloro-2-butene	7.137	88	18124	10.53	ug/L	98
101) bromobenzene	7.363	156	44143	10.16	ug/L	91
102) 1,1,2,2-tetrachloroethane	7.368	83	73427	10.62	ug/L	99
103) trans-1,4-dichloro-2-b...	7.405	53	14299	10.32	ug/L	93
104) 1,2,3-trichloropropane	7.415	110	14898	10.17	ug/L	94
105) n-propylbenzene	7.468	91	207893	10.43	ug/L	99
106) 2-chlorotoluene	7.541	126	40539	10.56	ug/L	98
107) 4-chlorotoluene	7.662	126	39857	10.04	ug/L	95
109) 1,3,5-trimethylbenzene	7.646	105	131267	10.53	ug/L	98
110) tert-butylbenzene	7.939	119	104099	10.37	ug/L	100
111) 1,2,4-trimethylbenzene	7.997	105	135339	9.22	ug/L	99
112) sec-butylbenzene	8.149	105	162925	10.68	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	75166	10.23	ug/L	99
114) p-isopropyltoluene	8.306	119	125826	10.59	ug/L	99
115) 1,4-dichlorobenzene	8.354	146	75767	9.91	ug/L	99
116) 1,2-dichlorobenzene	8.694	146	73034	10.23	ug/L	98
118) n-butylbenzene	8.700	92	66489	10.62	ug/L	98
120) 1,2-dibromo-3-chloropr...	9.460	157	10999	10.34	ug/L	96
121) 1,3,5-trichlorobenzene	9.643	180	46554	10.09	ug/L	95
122) 1,2,4-trichlorobenzene	10.267	180	41356	10.13	ug/L	98
123) hexachlorobutadiene	10.425	225	15033	9.67	ug/L	96
124) naphthalene	10.514	128	137299	10.13	ug/L	98
125) 1,2,3-trichlorobenzene	10.734	180	40699	10.52	ug/L	97
126) hexachloroethane	8.951	201	18283	10.26	ug/L	91
127) Benzyl chloride	8.469	91	86201	10.44	ug/L	99
128) 2-ethylhexyl acrylate	10.524	70	4624	1.84	ug/L	92
129) 2-methylnaphthalene	11.604	142	24925	5.07	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49940.D
 Acq On : 20 Apr 2018 11:26 pm
 Operator : JessicaP
 Sample : ic1992-10
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 23 10:36:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49941.D
 Acq On : 20 Apr 2018 11:51 pm
 Operator : JessicaP
 Sample : ic1992-20
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 23 10:36:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	293789	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	350330	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	528458	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	450218	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	208689	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	179553	51.23	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 102.46%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	182111	49.37	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 98.74%		
77) toluene-d8 (s)	4.956	98	584053	49.94	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 99.88%		
100) 4-bromofluorobenzene (s)	7.232	95	213766	50.12	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 100.24%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	186397	1913.85	ug/L	98
3) tertiary butyl alcohol	2.314	59	83093	95.23	ug/L	95
4) 1,4-dioxane	4.275	88	38913	465.47	ug/L	95
6) chlorodifluoromethane	1.139	51	112296	19.63	ug/L	99
7) dichlorodifluoromethane	1.129	85	139733	20.32	ug/L	100
10) chloromethane	1.239	50	149650	19.81	ug/L	99
11) vinyl chloride	1.302	62	121595	19.67	ug/L	99
12) bromomethane	1.490	94	47358	19.06	ug/L	99
13) chloroethane	1.553	64	48281	18.75	ug/L	98
14) trichlorofluoromethane	1.695	101	154851	20.20	ug/L	98
15) vinyl bromide	1.663	106	81228	19.56	ug/L	99
17) ethyl ether	1.852	74	42866	19.42	ug/L	97
18) 2-chloropropane	1.920	43	128583	19.64	ug/L	99
19) acrolein	1.931	56	25060	19.22	ug/L	96
20) freon 113	1.994	151	53766	20.23	ug/L	98
21) 1,1-dichloroethene	1.989	61	139291	20.29	ug/L	99
22) acetone	2.010	58	41870	78.42	ug/L	100
23) acetonitrile	2.167	41	166839	194.93	ug/L	99
24) iodomethane	2.083	142	41401	21.19	ug/L	97
25) carbon disulfide	2.125	76	207727	19.31	ug/L	99
26) methylene chloride	2.272	84	90510	18.87	ug/L	99
27) methyl acetate	2.183	43	91286	19.51	ug/L	98
28) methyl tert butyl ether	2.424	73	256655	19.87	ug/L	99
29) trans-1,2-dichloroethene	2.429	96	82939	19.87	ug/L	98
30) hexane	2.591	56	52037	21.08	ug/L	99
31) di-isopropyl ether	2.702	45	294338	20.12	ug/L	91
32) ethyl tert-butyl ether	2.922	59	270587	20.05	ug/L	99
33) 1,1-dichloroethane	2.691	63	174426	20.05	ug/L	98
34) chloroprene	2.733	53	128122	20.80	ug/L	98
35) acrylonitrile	2.403	53	45045	20.26	ug/L	99
36) vinyl acetate	2.681	86	13848	21.24	ug/L #	89
37) ethyl acetate	3.042	45	21263	20.32	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49941.D
 Acq On : 20 Apr 2018 11:51 pm
 Operator : JessicaP
 Sample : ic1992-20
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 23 10:36:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	54573	80.31	ug/L	98
39) 2,2-dichloropropane	3.048	77	118371	19.62	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	94991	19.82	ug/L	100
41) propionitrile	3.063	54	213154	201.53	ug/L	73
42) methyl acrylate	3.074	85	18909	21.12	ug/L	99
43) bromochloromethane	3.189	128	44070	20.96	ug/L	93
44) tetrahydrofuran	3.200	71	16941	20.59	ug/L	96
45) chloroform	3.247	83	169680	19.25	ug/L	98
47) methacrylonitrile	3.163	67	47391	20.87	ug/L	100
48) 1,1,1-trichloroethane	3.362	97	140644	19.81	ug/L	# 45
49) cyclohexane	3.409	84	105302	20.20	ug/L	97
50) 1,1-dichloropropene	3.467	75	126559	19.53	ug/L	97
51) carbon tetrachloride	3.467	119	114089	19.86	ug/L	98
52) isobutyl alcohol	3.504	43	61115	208.36	ug/L	99
53) tert-amyl alcohol	3.588	55	29117	104.08	ug/L	94
56) n-butyl alcohol	3.955	56	213065	1108.27	ug/L	100
57) benzene	3.598	78	348830	19.57	ug/L	99
58) tert-amyl methyl ether	3.672	73	262942	20.09	ug/L	99
59) iso-octane	3.672	57	221549	20.44	ug/L	99
60) heptane	3.782	57	45226	20.16	ug/L	96
61) isopropyl acetate	3.609	87	18688	20.83	ug/L	97
62) 1,2-dichloroethane	3.624	62	132410	19.06	ug/L	99
63) trichloroethene	4.044	95	93763	19.41	ug/L	99
64) ethyl acrylate	4.091	55	149916	21.18	ug/L	99
65) 2-nitropropane	4.584	43	28583	20.98	ug/L	96
66) 2-chloroethyl vinyl ether	4.626	63	275147	130.07	ug/L	99
67) methyl methacrylate	4.259	69	72561	21.18	ug/L	98
68) 1,2-dichloropropane	4.233	63	101961	19.80	ug/L	99
69) methylcyclohexane	4.217	83	129064	21.02	ug/L	98
70) dibromomethane	4.290	93	71073	19.53	ug/L	94
71) bromodichloromethane	4.416	83	133405	20.13	ug/L	99
72) epichlorohydrin	4.662	57	63039	110.38	ug/L	91
73) cis-1,3-dichloropropene	4.746	75	152981	20.67	ug/L	99
74) 4-methyl-2-pentanone	4.862	58	202487	85.31	ug/L	100
75) 3-methyl-1-butanol	4.898	70	69628	444.34	ug/L	98
78) toluene	5.014	92	202199	19.06	ug/L	99
79) ethyl methacrylate	5.239	69	126851	21.58	ug/L	100
80) trans-1,3-dichloropropene	5.192	75	137998	20.74	ug/L	98
81) 1,1,2-trichloroethane	5.355	83	82091	19.43	ug/L	96
82) 2-hexanone	5.533	58	208240	86.50	ug/L	98
83) tetrachloroethene	5.428	164	66436	19.77	ug/L	99
84) 1,3-dichloropropane	5.491	76	137354	19.68	ug/L	99
85) butyl acetate	5.632	56	74303	20.44	ug/L	97
86) dibromochloromethane	5.664	129	99886	20.45	ug/L	96
87) 1,2-dibromoethane	5.764	107	102883	19.67	ug/L	98
88) n-butyl ether	6.293	57	372824	20.67	ug/L	99
89) chlorobenzene	6.188	112	216312	19.40	ug/L	98
90) 1,1,1,2-tetrachloroethane	6.267	131	79576	20.60	ug/L	100
91) ethylbenzene	6.277	91	383436	20.06	ug/L	99
92) m,p-xylene	6.398	106	274011	39.97	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49941.D
 Acq On : 20 Apr 2018 11:51 pm
 Operator : JessicaP
 Sample : ic1992-20
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 23 10:36:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	298631	20.22	ug/L	98
94) styrene	6.760	104	227146	20.99	ug/L	99
95) butyl acrylate	6.707	56	92351	22.42	ug/L	98
96) bromoform	6.912	173	66957	21.37	ug/L	97
97) isopropylbenzene	7.080	105	340459	20.47	ug/L	99
98) cis-1,4-dichloro-2-butene	7.137	88	40312	22.48	ug/L	99
101) bromobenzene	7.357	156	88074	19.39	ug/L	95
102) 1,1,2,2-tetrachloroethane	7.368	83	145170	19.93	ug/L	98
103) trans-1,4-dichloro-2-b...	7.405	53	31067	21.40	ug/L	98
104) 1,2,3-trichloropropane	7.415	110	30411	19.86	ug/L	98
105) n-propylbenzene	7.468	91	424788	20.30	ug/L	99
106) 2-chlorotoluene	7.541	126	79968	19.80	ug/L	95
107) 4-chlorotoluene	7.662	126	80645	19.48	ug/L	96
109) 1,3,5-trimethylbenzene	7.646	105	269189	20.53	ug/L	98
110) tert-butylbenzene	7.939	119	212750	20.21	ug/L	100
111) 1,2,4-trimethylbenzene	7.997	105	273449	18.10	ug/L	100
112) sec-butylbenzene	8.154	105	332146	20.64	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	150849	19.62	ug/L	99
114) p-isopropyltoluene	8.306	119	257231	20.56	ug/L	99
115) 1,4-dichlorobenzene	8.354	146	156008	19.60	ug/L	100
116) 1,2-dichlorobenzene	8.694	146	147731	19.78	ug/L	99
118) n-butylbenzene	8.700	92	140651	21.33	ug/L	100
120) 1,2-dibromo-3-chloropr...	9.460	157	24211	21.68	ug/L	95
121) 1,3,5-trichlorobenzene	9.643	180	98558	20.45	ug/L	99
122) 1,2,4-trichlorobenzene	10.267	180	88642	20.78	ug/L	99
123) hexachlorobutadiene	10.419	225	31839	19.75	ug/L	96
124) naphthalene	10.514	128	292192	20.62	ug/L	100
125) 1,2,3-trichlorobenzene	10.734	180	85037	20.90	ug/L	99
126) hexachloroethane	8.951	201	39134	20.97	ug/L	99
127) Benzyl chloride	8.469	91	183658	21.19	ug/L	99
128) 2-ethylhexyl acrylate	10.519	70	10909	4.28	ug/L	96
129) 2-methylnaphthalene	11.604	142	56929	11.06	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
Data File : 2V49941.D
Acq On : 20 Apr 2018 11:51 pm
Operator : JessicaP
Sample : ic1992-20
Misc : MS25736,V2V1992,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

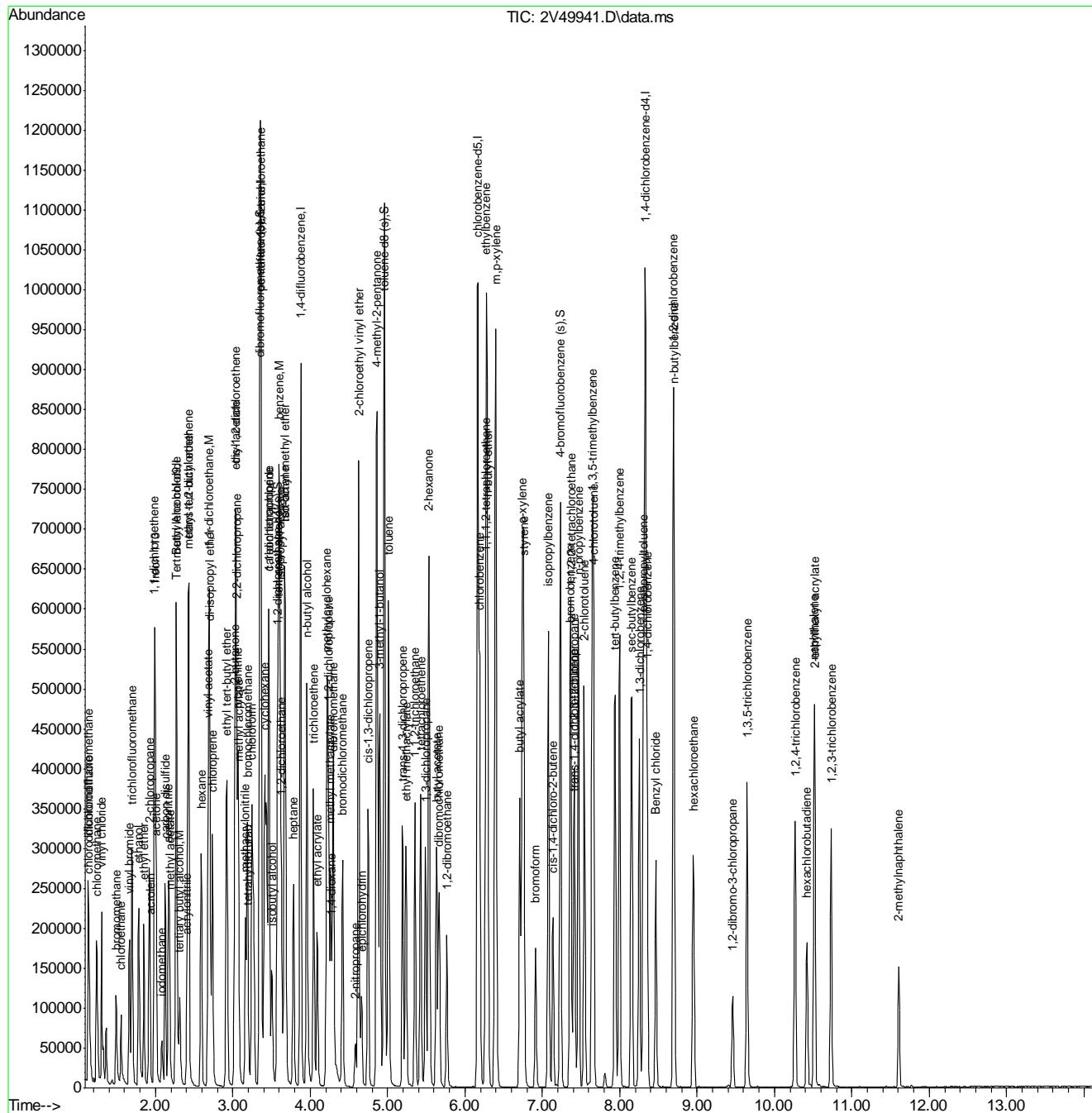
Quant Time: Apr 23 10:36:43 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M

Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um

Last Update : Mon Apr 23 10:34:41 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49942.D
 Acq On : 21 Apr 2018 12:17 am
 Operator : JessicaP
 Sample : icc1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 23 10:37:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.272	65	305483	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	377044	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	564820	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	486025	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	226775	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	190716	50.38	ug/L	0.00
Spiked Amount 50.000 Range 76 - 120			Recovery	=	100.76%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	195457	49.66	ug/L	0.00
Spiked Amount 50.000 Range 64 - 135			Recovery	=	99.32%	
77) toluene-d8 (s)	4.961	98	620522	49.16	ug/L	0.00
Spiked Amount 50.000 Range 76 - 117			Recovery	=	98.32%	
100) 4-bromofluorobenzene (s)	7.232	95	227696	49.11	ug/L	0.00
Spiked Amount 50.000 Range 72 - 122			Recovery	=	98.22%	
Target Compounds						
				Qvalue		
2) ethanol	1.789	45	467540	4645.32	ug/L	100
3) tertiary butyl alcohol	2.319	59	212428	235.73	ug/L	100
4) 1,4-dioxane	4.280	88	102081	1188.01	ug/L	100
6) chlorodifluoromethane	1.139	51	288431	46.96	ug/L	100
7) dichlorodifluoromethane	1.129	85	358425	48.31	ug/L	100
10) chloromethane	1.239	50	390670	48.12	ug/L	100
11) vinyl chloride	1.302	62	314681	47.41	ug/L	100
12) bromomethane	1.485	94	102467	38.69	ug/L	100
13) chloroethane	1.553	64	115382	42.07	ug/L	100
14) trichlorofluoromethane	1.695	101	395198	47.84	ug/L	100
15) vinyl bromide	1.658	106	210838	47.32	ug/L	100
17) ethyl ether	1.852	74	113794	48.11	ug/L	100
18) 2-chloropropane	1.920	43	326700	46.47	ug/L	100
19) acrolein	1.931	56	64739	46.39	ug/L	100
20) freon 113	1.989	151	133515	46.60	ug/L	100
21) 1,1-dichloroethene	1.989	61	357283	48.26	ug/L	100
22) acetone	2.010	58	109527	191.14	ug/L	100
23) acetonitrile	2.172	41	425329	463.42	ug/L	100
24) iodomethane	2.083	142	132758	62.39	ug/L	100
25) carbon disulfide	2.125	76	528214	45.86	ug/L	100
26) methylene chloride	2.272	84	230237	44.97	ug/L	100
27) methyl acetate	2.183	43	236121	47.06	ug/L	100
28) methyl tert butyl ether	2.424	73	673492	48.50	ug/L	100
29) trans-1,2-dichloroethene	2.429	96	209059	46.59	ug/L	100
30) hexane	2.592	56	130173	48.62	ug/L	100
31) di-isopropyl ether	2.696	45	766933	48.67	ug/L	100
32) ethyl tert-butyl ether	2.922	59	722643	49.73	ug/L	100
33) 1,1-dichloroethane	2.691	63	448480	47.88	ug/L	100
34) chloroprene	2.733	53	333172	49.97	ug/L	100
35) acrylonitrile	2.403	53	116724	48.69	ug/L	100
36) vinyl acetate	2.681	86	36579	51.60	ug/L	100
37) ethyl acetate	3.042	45	55573	49.21	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49942.D
 Acq On : 21 Apr 2018 12:17 am
 Operator : JessicaP
 Sample : icc1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 23 10:37:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	146873	200.72	ug/L	100
39) 2,2-dichloropropane	3.048	77	313714	48.46	ug/L	100
40) cis-1,2-dichloroethene	3.037	96	242973	47.16	ug/L	100
41) propionitrile	3.069	54	557806	489.48	ug/L	100
42) methyl acrylate	3.074	85	49725	51.12	ug/L	100
43) bromochloromethane	3.189	128	115568	50.72	ug/L	100
44) tetrahydrofuran	3.200	71	43764	49.18	ug/L	100
45) chloroform	3.247	83	443513	47.01	ug/L	100
47) methacrylonitrile	3.163	67	124943	50.82	ug/L	100
48) 1,1,1-trichloroethane	3.362	97	366160	47.99	ug/L	100
49) cyclohexane	3.409	84	267327	47.57	ug/L	100
50) 1,1-dichloropropene	3.462	75	329371	47.38	ug/L	100
51) carbon tetrachloride	3.462	119	296434	47.99	ug/L	100
52) isobutyl alcohol	3.509	43	163661	515.35	ug/L	100
53) tert-amyl alcohol	3.588	55	73366	242.26	ug/L	100
56) n-butyl alcohol	3.960	56	570597	2734.63	ug/L	100
57) benzene	3.598	78	897259	47.23	ug/L	100
58) tert-amyl methyl ether	3.672	73	691592	49.41	ug/L	100
59) iso-octane	3.672	57	563093	48.46	ug/L	100
60) heptane	3.782	57	116177	48.40	ug/L	100
61) isopropyl acetate	3.609	87	47789	49.49	ug/L	100
62) 1,2-dichloroethane	3.624	62	339750	46.12	ug/L	100
63) trichloroethene	4.044	95	243863	47.43	ug/L	100
64) ethyl acrylate	4.091	55	397202	52.07	ug/L	100
65) 2-nitropropane	4.584	43	77300	52.65	ug/L	100
66) 2-chloroethyl vinyl ether	4.626	63	806639	342.08	ug/L	100
67) methyl methacrylate	4.259	69	192493	52.12	ug/L	100
68) 1,2-dichloropropane	4.233	63	262411	47.74	ug/L	100
69) methylcyclohexane	4.217	83	327861	49.60	ug/L	100
70) dibromomethane	4.296	93	183506	47.34	ug/L	100
71) bromodichloromethane	4.416	83	352248	49.68	ug/L	100
72) epichlorohydrin	4.663	57	159213	257.03	ug/L	100
73) cis-1,3-dichloropropene	4.746	75	403611	50.78	ug/L	100
74) 4-methyl-2-pentanone	4.862	58	531678	207.61	ug/L	100
75) 3-methyl-1-butanol	4.904	70	190521	1112.88	ug/L	100
78) toluene	5.014	92	528034	46.43	ug/L	100
79) ethyl methacrylate	5.239	69	340529	53.06	ug/L	100
80) trans-1,3-dichloropropene	5.192	75	369903	51.22	ug/L	100
81) 1,1,2-trichloroethane	5.355	83	217424	47.87	ug/L	100
82) 2-hexanone	5.533	58	545587	207.52	ug/L	100
83) tetrachloroethene	5.428	164	171676	47.41	ug/L	100
84) 1,3-dichloropropane	5.491	76	360293	47.93	ug/L	100
85) butyl acetate	5.633	56	198173	50.33	ug/L	100
86) dibromochloromethane	5.664	129	269347	50.92	ug/L	100
87) 1,2-dibromoethane	5.764	107	276283	49.06	ug/L	100
88) n-butyl ether	6.293	57	987635	50.47	ug/L	100
89) chlorobenzene	6.194	112	564170	47.08	ug/L	100
90) 1,1,1,2-tetrachloroethane	6.267	131	211603	50.53	ug/L	100
91) ethylbenzene	6.277	91	1010530	48.96	ug/L	100
92) m,p-xylene	6.398	106	714084	96.49	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49942.D
 Acq On : 21 Apr 2018 12:17 am
 Operator : JessicaP
 Sample : icc1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 23 10:37:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

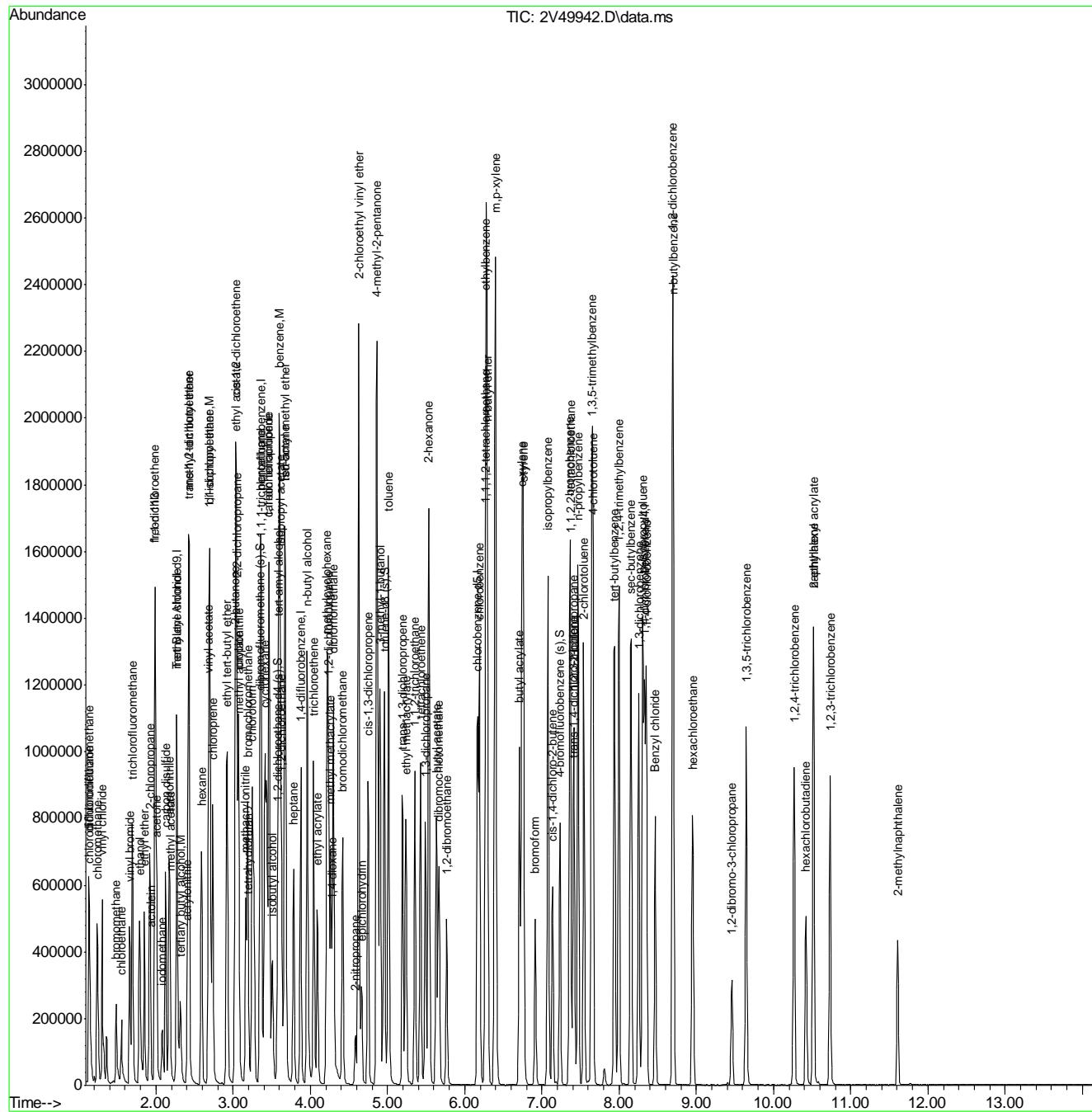
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	787247	49.29	ug/L	100
94) styrene	6.760	104	610857	51.92	ug/L	100
95) butyl acrylate	6.707	56	256876	56.79	ug/L	100
96) bromoform	6.912	173	186250	54.54	ug/L	100
97) isopropylbenzene	7.080	105	894525	49.65	ug/L	100
98) cis-1,4-dichloro-2-butene	7.137	88	114293	57.61	ug/L	100
101) bromobenzene	7.363	156	234892	47.80	ug/L	100
102) 1,1,2,2-tetrachloroethane	7.368	83	384716	48.63	ug/L	100
103) trans-1,4-dichloro-2-b...	7.405	53	84536	53.05	ug/L	100
104) 1,2,3-trichloropropane	7.415	110	80293	48.29	ug/L	100
105) n-propylbenzene	7.468	91	1123255	49.28	ug/L	100
106) 2-chlorotoluene	7.546	126	212748	48.54	ug/L	100
107) 4-chlorotoluene	7.662	126	212715	47.46	ug/L	100
109) 1,3,5-trimethylbenzene	7.646	105	722261	50.50	ug/L	100
110) tert-butylbenzene	7.939	119	573229	50.04	ug/L	100
111) 1,2,4-trimethylbenzene	7.997	105	724973	44.77	ug/L	100
112) sec-butylbenzene	8.154	105	896060	51.02	ug/L	100
113) 1,3-dichlorobenzene	8.254	146	408369	49.01	ug/L	100
114) p-isopropyltoluene	8.306	119	706065	51.72	ug/L	100
115) 1,4-dichlorobenzene	8.354	146	414559	48.06	ug/L	100
116) 1,2-dichlorobenzene	8.694	146	404814	49.95	ug/L	100
118) n-butylbenzene	8.700	92	383549	53.03	ug/L	100
120) 1,2-dibromo-3-chloropr...	9.460	157	70259	57.09	ug/L	100
121) 1,3,5-trichlorobenzene	9.643	180	278034	52.93	ug/L	100
122) 1,2,4-trichlorobenzene	10.267	180	249788	53.58	ug/L	100
123) hexachlorobutadiene	10.419	225	88853	50.82	ug/L	100
124) naphthalene	10.519	128	812276	52.48	ug/L	100
125) 1,2,3-trichlorobenzene	10.734	180	238509	53.60	ug/L	100
126) hexachloroethane	8.951	201	113017	55.36	ug/L	100
127) Benzyl chloride	8.469	91	516129	54.33	ug/L	100
128) 2-ethylhexyl acrylate	10.519	70	34520	12.24	ug/L	100
129) 2-methylnaphthalene	11.610	142	170257	29.81	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49942.D
 Acq On : 21 Apr 2018 12:17 am
 Operator : JessicaP
 Sample : icc1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 23 10:37:07 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49943.D
 Acq On : 21 Apr 2018 12:42 am
 Operator : JessicaP
 Sample : ic1992-100
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 23 10:37:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.277	65	295079	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	387113	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	581801	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	505985	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	239373	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	198565	51.09	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 102.18%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	205452	50.68	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 101.36%		
77) toluene-d8 (s)	4.961	98	645698	49.14	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 98.28%		
100) 4-bromofluorobenzene (s)	7.232	95	240586	49.16	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 98.32%		
Target Compounds						
				Qvalue		
2) ethanol	1.795	45	803971	8269.64	ug/L	100
3) tertiary butyl alcohol	2.324	59	397351	456.49	ug/L	97
4) 1,4-dioxane	4.285	88	186139	2242.64	ug/L	98
6) chlorodifluoromethane	1.139	51	564484	89.52	ug/L	97
7) dichlorodifluoromethane	1.129	85	732836	96.21	ug/L	100
10) chloromethane	1.239	50	777780	93.31	ug/L	99
11) vinyl chloride	1.302	62	634491	93.11	ug/L	100
12) bromomethane	1.485	94	154968	56.99	ug/L	96
13) chloroethane	1.548	64	206017	73.16	ug/L	96
14) trichlorofluoromethane	1.695	101	812954	95.84	ug/L	100
15) vinyl bromide	1.658	106	431079	94.24	ug/L	98
17) ethyl ether	1.852	74	230002	94.71	ug/L	97
18) 2-chloropropane	1.920	43	667777	92.52	ug/L	99
19) acrolein	1.931	56	127614	89.07	ug/L	100
20) freon 113	1.989	151	285641	97.09	ug/L	100
21) 1,1-dichloroethene	1.989	61	729823	96.02	ug/L	99
22) acetone	2.009	58	205087	348.60	ug/L	98
23) acetonitrile	2.172	41	806282	855.64	ug/L	100
24) iodomethane	2.083	142	333479	152.65	ug/L	98
25) carbon disulfide	2.125	76	1078316	91.18	ug/L	99
26) methylene chloride	2.272	84	466172	88.69	ug/L	97
27) methyl acetate	2.183	43	455801	88.48	ug/L	98
28) methyl tert butyl ether	2.424	73	1369829	96.08	ug/L	100
29) trans-1,2-dichloroethene	2.429	96	433125	94.01	ug/L	98
30) hexane	2.591	56	276104	100.45	ug/L	98
31) di-isopropyl ether	2.702	45	1555220	96.12	ug/L	92
32) ethyl tert-butyl ether	2.922	59	1469950	98.52	ug/L	99
33) 1,1-dichloroethane	2.691	63	920383	95.71	ug/L	100
34) chloroprene	2.733	53	687213	100.38	ug/L	100
35) acrylonitrile	2.403	53	222451	90.38	ug/L	99
36) vinyl acetate	2.681	86	73466	100.93	ug/L #	86
37) ethyl acetate	3.042	45	104881	90.45	ug/L #	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49943.D
 Acq On : 21 Apr 2018 12:42 am
 Operator : JessicaP
 Sample : ic1992-100
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 23 10:37:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
38) 2-butanone	3.027	72	274266	365.07	ug/L	99
39) 2,2-dichloropropane	3.048	77	643644	96.83	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	502669	95.03	ug/L	100
41) propionitrile	3.069	54	1032792	882.71	ug/L	97
42) methyl acrylate	3.079	85	96155	96.28	ug/L	# 84
43) bromochloromethane	3.189	128	234704	100.33	ug/L	94
44) tetrahydrofuran	3.200	71	83469	91.36	ug/L	98
45) chloroform	3.247	83	900193	92.93	ug/L	100
47) methacrylonitrile	3.163	67	242785	96.18	ug/L	98
48) 1,1,1-trichloroethane	3.362	97	744966	95.10	ug/L	83
49) cyclohexane	3.409	84	560276	97.11	ug/L	98
50) 1,1-dichloropropene	3.467	75	673041	94.29	ug/L	98
51) carbon tetrachloride	3.467	119	602419	94.98	ug/L	99
52) isobutyl alcohol	3.514	43	309760	950.03	ug/L	99
53) tert-amyl alcohol	3.593	55	137411	441.94	ug/L	94
56) n-butyl alcohol	3.965	56	1062917	4945.43	ug/L	99
57) benzene	3.598	78	1826714	93.36	ug/L	100
58) tert-amyl methyl ether	3.677	73	1394816	96.73	ug/L	99
59) iso-octane	3.672	57	1180145	98.59	ug/L	99
60) heptane	3.782	57	245974	99.48	ug/L	99
61) isopropyl acetate	3.609	87	93498	94.00	ug/L	99
62) 1,2-dichloroethane	3.630	62	676143	89.10	ug/L	99
63) trichloroethene	4.044	95	496200	93.68	ug/L	98
64) ethyl acrylate	4.091	55	773124	98.39	ug/L	100
65) 2-nitropropane	4.584	43	152868	101.08	ug/L	97
66) 2-chloroethyl vinyl ether	4.626	63	1652228	680.24	ug/L	99
67) methyl methacrylate	4.264	69	379810	99.84	ug/L	96
68) 1,2-dichloropropane	4.233	63	538758	95.15	ug/L	98
69) methylcyclohexane	4.217	83	693674	101.87	ug/L	98
70) dibromomethane	4.295	93	371097	92.94	ug/L	98
71) bromodichloromethane	4.416	83	723764	99.09	ug/L	99
72) epichlorohydrin	4.668	57	300493	470.95	ug/L	92
73) cis-1,3-dichloropropene	4.746	75	832093	101.64	ug/L	99
74) 4-methyl-2-pentanone	4.862	58	1004501	380.79	ug/L	99
75) 3-methyl-1-butanol	4.904	70	355537	2016.16	ug/L	99
78) toluene	5.014	92	1068076	90.21	ug/L	100
79) ethyl methacrylate	5.239	69	682911	102.21	ug/L	99
80) trans-1,3-dichloropropene	5.192	75	762749	101.45	ug/L	99
81) 1,1,2-trichloroethane	5.355	83	432591	91.48	ug/L	97
82) 2-hexanone	5.538	58	1024144	374.18	ug/L	94
83) tetrachloroethene	5.428	164	354389	94.01	ug/L	98
84) 1,3-dichloropropane	5.491	76	726031	92.77	ug/L	99
85) butyl acetate	5.632	56	384336	93.76	ug/L	99
86) dibromochloromethane	5.669	129	550570	99.97	ug/L	99
87) 1,2-dibromoethane	5.769	107	551694	94.09	ug/L	98
88) n-butyl ether	6.293	57	1987594	97.57	ug/L	99
89) chlorobenzene	6.193	112	1152654	92.39	ug/L	99
90) 1,1,1,2-tetrachloroethane	6.267	131	440281	100.98	ug/L	100
91) ethylbenzene	6.277	91	2063442	96.02	ug/L	100
92) m,p-xylene	6.398	106	1456449	189.04	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49943.D
 Acq On : 21 Apr 2018 12:42 am
 Operator : JessicaP
 Sample : ic1992-100
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 23 10:37:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

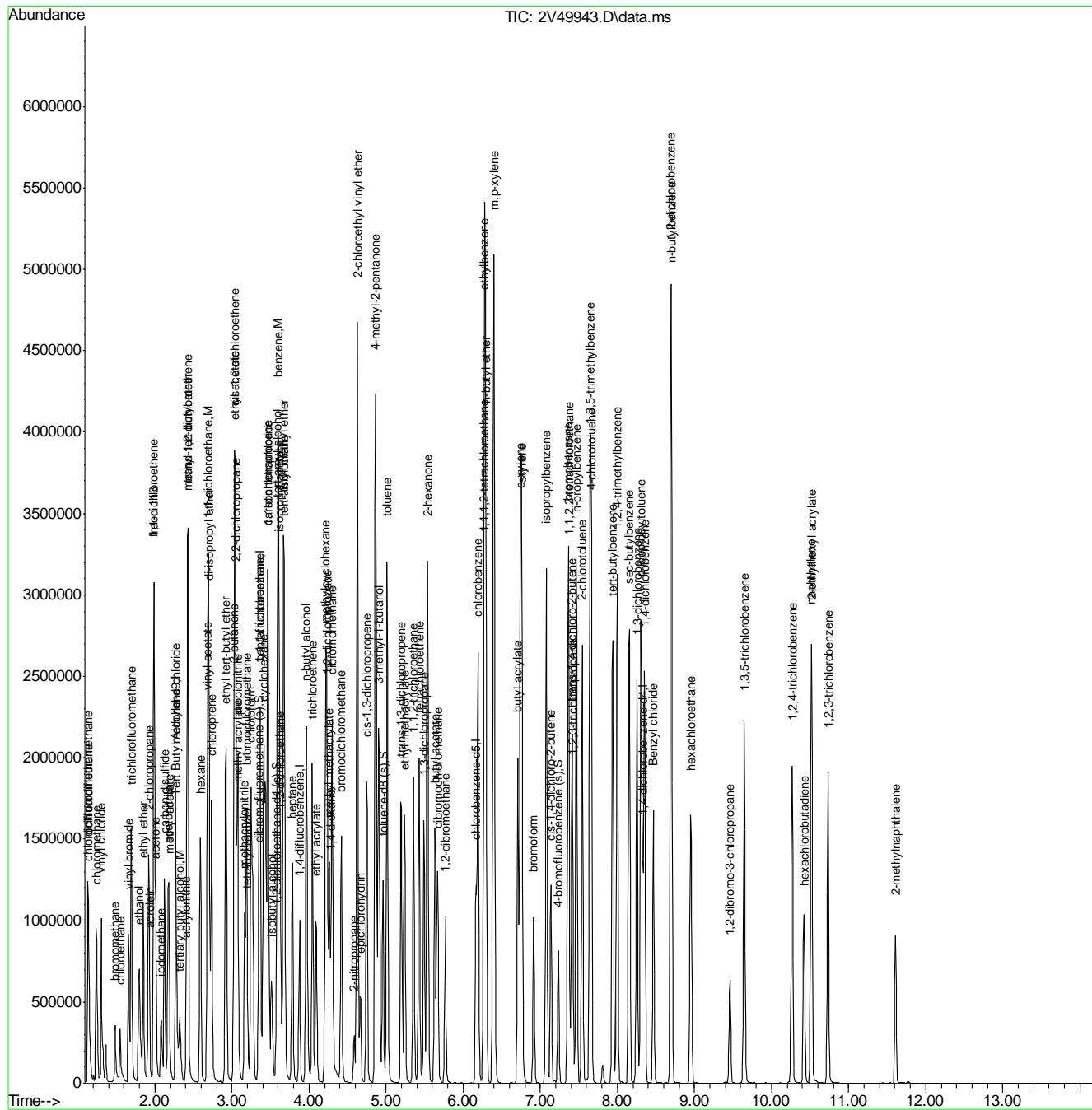
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) o-xylene	6.739	91	1602364	96.37	ug/L	98
94) styrene	6.760	104	1232726	100.64	ug/L	98
95) butyl acrylate	6.707	56	518654	110.14	ug/L	99
96) bromoform	6.912	173	378912	106.58	ug/L	100
97) isopropylbenzene	7.080	105	1829592	97.54	ug/L	99
98) cis-1,4-dichloro-2-butene	7.137	88	231982	112.32	ug/L	98
101) bromobenzene	7.363	156	485363	93.58	ug/L	98
102) 1,1,2,2-tetrachloroethane	7.368	83	766758	91.81	ug/L	99
103) trans-1,4-dichloro-2-b...	7.410	53	165648	98.47	ug/L	95
104) 1,2,3-trichloropropane	7.420	110	158718	90.44	ug/L	95
105) n-propylbenzene	7.467	91	2287720	95.09	ug/L	100
106) 2-chlorotoluene	7.546	126	433655	93.73	ug/L	97
107) 4-chlorotoluene	7.661	126	432960	91.52	ug/L	99
109) 1,3,5-trimethylbenzene	7.646	105	1484189	98.31	ug/L	100
110) tert-butylbenzene	7.939	119	1175541	97.21	ug/L	99
111) 1,2,4-trimethylbenzene	7.997	105	1493777	87.39	ug/L	99
112) sec-butylbenzene	8.154	105	1837727	99.13	ug/L	100
113) 1,3-dichlorobenzene	8.254	146	838723	95.36	ug/L	98
114) p-isopropyltoluene	8.306	119	1441862	100.06	ug/L	100
115) 1,4-dichlorobenzene	8.354	146	845751	92.88	ug/L	99
116) 1,2-dichlorobenzene	8.694	146	835411	97.65	ug/L	99
118) n-butylbenzene	8.700	92	803579	105.25	ug/L	100
120) 1,2-dibromo-3-chloropr...	9.460	157	140572	108.22	ug/L	99
121) 1,3,5-trichlorobenzene	9.649	180	580512	104.70	ug/L	99
122) 1,2,4-trichlorobenzene	10.267	180	517972	105.26	ug/L	99
123) hexachlorobutadiene	10.425	225	187169	101.42	ug/L	99
124) naphthalene	10.514	128	1619459	99.12	ug/L	100
125) 1,2,3-trichlorobenzene	10.734	180	491847	104.72	ug/L	100
126) hexachloroethane	8.951	201	236535	109.76	ug/L	100
127) Benzyl chloride	8.469	91	1052917	105.00	ug/L	99
128) 2-ethylhexyl acrylate	10.519	70	77911	26.17	ug/L	97
129) 2-methylnaphthalene	11.609	142	350459	58.13	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49943.D
 Acq On : 21 Apr 2018 12:42 am
 Operator : JessicaP
 Sample : ic1992-100
 Misc : MS25736,V2V1992,,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 23 10:37:33 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49944.D
 Acq On : 21 Apr 2018 1:08 am
 Operator : JessicaP
 Sample : ic1992-200
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 23 10:49:53 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.288	65	322106	500.00	ug/L	0.02
5) pentafluorobenzene	3.357	168	401392	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	606900	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	524529	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.333	152	251862	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	201941	49.98	ug/L	0.00
Spiked Amount 50.000 Range 76 - 120			Recovery	=	99.96%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	203735	48.10	ug/L	0.00
Spiked Amount 50.000 Range 64 - 135			Recovery	=	96.20%	
77) toluene-d8 (s)	4.962	98	660577	48.60	ug/L	0.00
Spiked Amount 50.000 Range 76 - 117			Recovery	=	97.20%	
100) 4-bromofluorobenzene (s)	7.237	95	249906	48.63	ug/L	0.00
Spiked Amount 50.000 Range 72 - 122			Recovery	=	97.26%	
Target Compounds						
3) tertiary butyl alcohol	2.335	59	875683	931.74	ug/L	99
4) 1,4-dioxane	4.290	88	397041	4447.67	ug/L	98
6) chlorodifluoromethane	1.139	51	1094858	169.68	ug/L	99
7) dichlorodifluoromethane	1.129	85	1403512	178.55	ug/L	99
10) chloromethane	1.239	50	1461700	170.75	ug/L	99
11) vinyl chloride	1.302	62	1290421	184.22	ug/L	100
14) trichlorofluoromethane	1.690	101	1615077	184.60	ug/L	99
15) vinyl bromide	1.653	106	786699	167.07	ug/L	99
17) ethyl ether	1.852	74	475373	190.04	ug/L #	85
18) 2-chloropropane	1.915	43	1300518	175.42	ug/L	99
19) acrolein	1.931	56	270771	184.78	ug/L	99
20) freon 113	1.989	151	573053	188.55	ug/L	95
21) 1,1-dichloroethene	1.983	61	1469204	187.36	ug/L	99
22) acetone	2.015	58	430848	717.82	ug/L	98
23) acetonitrile	2.172	41	1697328	1769.08	ug/L	100
24) iodomethane	2.078	142	755002	306.42	ug/L	97
25) carbon disulfide	2.120	76	2188965	180.50	ug/L	98
26) methylene chloride	2.272	84	951433	177.07	ug/L	96
27) methyl acetate	2.183	43	966597	183.61	ug/L	97
28) methyl tert butyl ether	2.424	73	2788780	189.58	ug/L	99
29) trans-1,2-dichloroethene	2.429	96	880172	185.63	ug/L	95
30) hexane	2.586	56	564536	197.97	ug/L	100
31) di-isopropyl ether	2.702	45	3086687	184.88	ug/L	93
32) ethyl tert-butyl ether	2.922	59	2981306	193.06	ug/L	100
33) 1,1-dichloroethane	2.686	63	1839980	185.53	ug/L	100
34) chloroprene	2.733	53	1379155	194.20	ug/L	99
35) acrylonitrile	2.408	53	469566	186.23	ug/L	99
36) vinyl acetate	2.681	86	157548	208.47	ug/L #	83
37) ethyl acetate	3.043	45	211760	178.56	ug/L #	90
38) 2-butanone	3.027	72	583415	757.21	ug/L	96
39) 2,2-dichloropropane	3.043	77	1278654	186.26	ug/L	98
40) cis-1,2-dichloroethene	3.037	96	1008896	185.09	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49944.D
 Acq On : 21 Apr 2018 1:08 am
 Operator : JessicaP
 Sample : ic1992-200
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 23 10:49:53 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) propionitrile	3.074	54	2156127	1803.69	ug/L	67
42) methyl acrylate	3.079	85	197882	192.11	ug/L #	92
43) bromochloromethane	3.189	128	447711	184.51	ug/L	96
44) tetrahydrofuran	3.200	71	173900	185.87	ug/L	96
45) chloroform	3.247	83	1812816	182.10	ug/L	99
47) methacrylonitrile	3.168	67	504576	193.70	ug/L	98
48) 1,1,1-trichloroethane	3.362	97	1514010	187.54	ug/L #	75
49) cyclohexane	3.410	84	1145990	192.26	ug/L	96
50) 1,1-dichloropropene	3.462	75	1354006	184.26	ug/L	99
51) carbon tetrachloride	3.462	119	1196588	183.10	ug/L	98
52) isobutyl alcohol	3.525	43	669055	1991.43	ug/L	97
53) tert-amyl alcohol	3.604	55	288550	908.20	ug/L #	66
56) n-butyl alcohol	3.981	56	2305608	10297.70	ug/L	98
57) benzene	3.598	78	3664139	181.02	ug/L	100
58) tert-amyl methyl ether	3.677	73	2815973	187.99	ug/L	99
59) iso-octane	3.672	57	2375906	190.61	ug/L	98
60) heptane	3.782	57	504141	195.59	ug/L	98
61) isopropyl acetate	3.609	87	194323	188.91	ug/L	96
62) 1,2-dichloroethane	3.630	62	1361363	174.70	ug/L	99
63) trichloroethene	4.044	95	1018979	185.90	ug/L	98
64) ethyl acrylate	4.096	55	1614069	197.32	ug/L	99
65) 2-nitropropane	4.584	43	348017	220.26	ug/L	98
66) 2-chloroethyl vinyl ether	4.631	63	3355882	1267.40	ug/L	98
67) methyl methacrylate	4.264	69	786066	198.13	ug/L	95
68) 1,2-dichloropropane	4.233	63	1068155	181.95	ug/L	99
69) methylcyclohexane	4.217	83	1421400	199.64	ug/L	98
70) dibromomethane	4.296	93	745273	180.53	ug/L	100
71) bromodichloromethane	4.416	83	1464909	192.49	ug/L	98
72) epichlorohydrin	4.668	57	648521	981.49	ug/L	99
73) cis-1,3-dichloropropene	4.747	75	1659072	193.87	ug/L	99
74) 4-methyl-2-pentanone	4.867	58	2093552	765.40	ug/L	95
75) 3-methyl-1-butanol	4.914	70	794719	4314.47	ug/L	97
78) toluene	5.014	92	2173303	179.26	ug/L	100
79) ethyl methacrylate	5.239	69	1411214	203.19	ug/L	99
80) trans-1,3-dichloropropene	5.197	75	1559729	199.76	ug/L	97
81) 1,1,2-trichloroethane	5.355	83	882395	181.94	ug/L	97
82) 2-hexanone	5.538	58	2164100	768.93	ug/L	95
83) tetrachloroethene	5.428	164	731484	188.59	ug/L	98
84) 1,3-dichloropropane	5.491	76	1462415	181.89	ug/L	99
85) butyl acetate	5.633	56	806186	191.21	ug/L	99
86) dibromochloromethane	5.669	129	1120699	196.31	ug/L	100
87) 1,2-dibromoethane	5.769	107	1128265	187.01	ug/L	99
88) n-butyl ether	6.293	57	3909282	185.68	ug/L	99
89) chlorobenzene	6.194	112	2351387	183.55	ug/L	98
90) 1,1,1,2-tetrachloroethane	6.272	131	892351	197.19	ug/L	99
91) ethylbenzene	6.283	91	4107849	185.32	ug/L	98
92) m,p-xylene	6.398	106	2946357	371.45	ug/L	98
93) o-xylene	6.744	91	3275111	190.88	ug/L	98
94) styrene	6.760	104	2510376	197.55	ug/L	97
95) butyl acrylate	6.707	56	1086924	219.87	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49944.D
 Acq On : 21 Apr 2018 1:08 am
 Operator : JessicaP
 Sample : ic1992-200
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 23 10:49:53 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:34:41 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) bromoform	6.917	173	813008	218.80	ug/L	100
97) isopropylbenzene	7.080	105	3767240	194.34	ug/L	99
98) cis-1,4-dichloro-2-butene	7.137	88	513547	235.03	ug/L	98
101) bromobenzene	7.363	156	999512	184.64	ug/L	98
102) 1,1,2,2-tetrachloroethane	7.373	83	1605254	184.57	ug/L	100
103) trans-1,4-dichloro-2-b...	7.410	53	362497	205.20	ug/L	95
104) 1,2,3-trichloropropane	7.421	110	329175	180.42	ug/L	97
105) n-propylbenzene	7.468	91	4689790	186.41	ug/L	99
106) 2-chlorotoluene	7.546	126	901368	186.62	ug/L	99
107) 4-chlorotoluene	7.662	126	893047	181.34	ug/L	97
109) 1,3,5-trimethylbenzene	7.646	105	3079694	194.29	ug/L	100
110) tert-butylbenzene	7.940	119	2472058	194.97	ug/L	99
111) 1,2,4-trimethylbenzene	7.997	105	3110433	175.71	ug/L	99
112) sec-butylbenzene	8.155	105	3842271	197.19	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	1764642	191.80	ug/L	98
114) p-isopropyltoluene	8.307	119	3032267	199.99	ug/L	99
115) 1,4-dichlorobenzene	8.354	146	1792670	188.80	ug/L	99
116) 1,2-dichlorobenzene	8.695	146	1766037	196.77	ug/L	100
118) n-butylbenzene	8.700	92	1698721	210.08	ug/L	98
120) 1,2-dibromo-3-chloropr...	9.460	157	318088	230.04	ug/L	98
121) 1,3,5-trichlorobenzene	9.649	180	1256992	214.20	ug/L	100
122) 1,2,4-trichlorobenzene	10.267	180	1142936	219.31	ug/L	98
123) hexachlorobutadiene	10.420	225	390872	200.93	ug/L	100
124) naphthalene	10.519	128	3465650	201.86	ug/L	99
125) 1,2,3-trichlorobenzene	10.734	180	1053969	212.02	ug/L	99
126) hexachloroethane	8.957	201	527114	229.67	ug/L	87
127) Benzyl chloride	8.469	91	2285433	215.26	ug/L	99
128) 2-ethylhexyl acrylate	10.519	70	167378	50.33	ug/L	98
129) 2-methylnaphthalene	11.610	142	791490	121.49	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992
Data File : 2V49944.D
Acq On : 21 Apr 2018 1:08 am
Operator : JessicaP
Sample : icl992-200
Misc : MS25736,V2V1992,5,,,,1
ALS Vial : 10 Sample Multiplier: 1

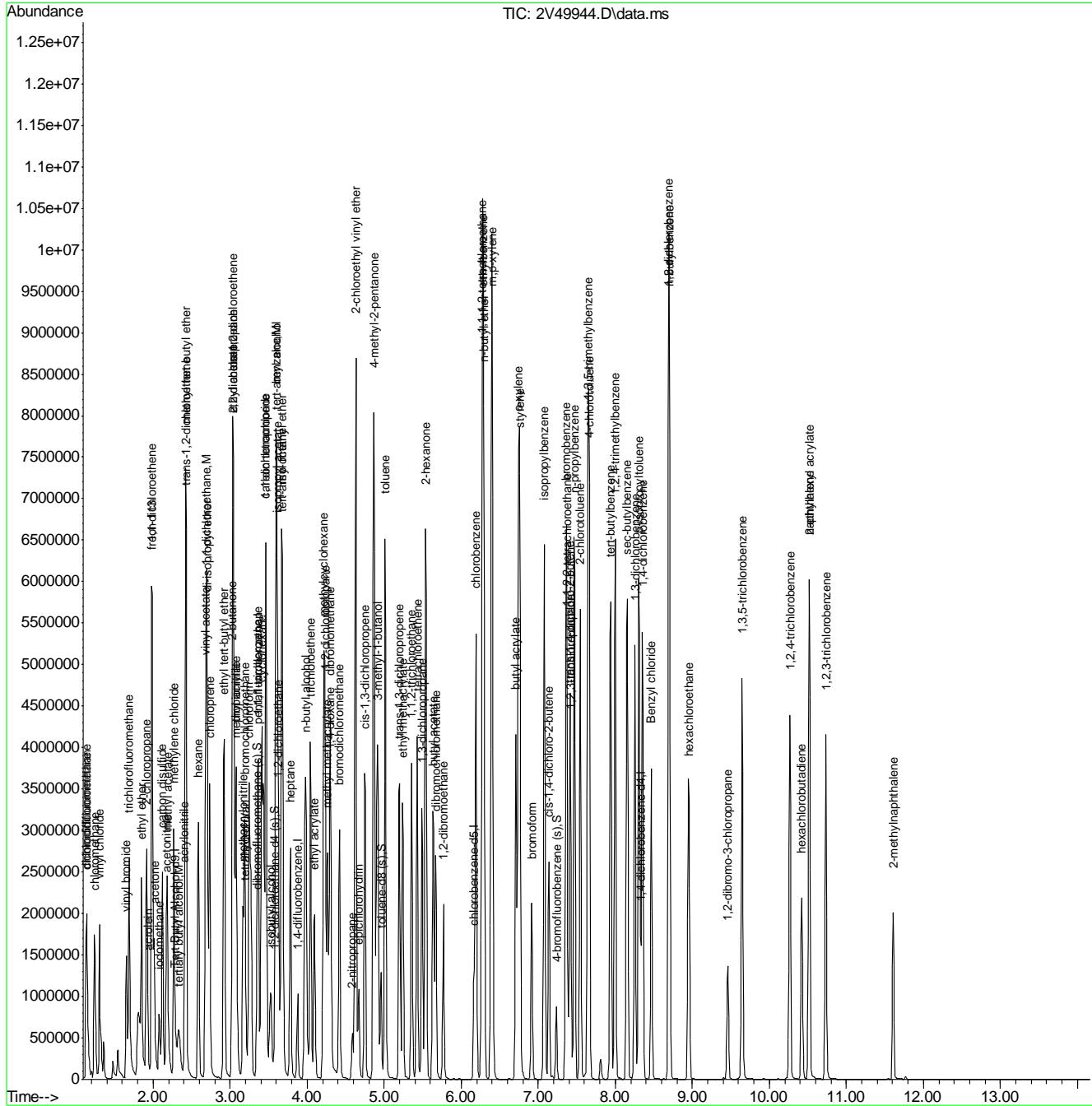
Quant Time: Apr 23 10:49:53 2018

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M

Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)

QLast Update : Mon Apr 23 10:34:41 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49947.D
 Acq On : 21 Apr 2018 2:24 am
 Operator : JessicaP
 Sample : icvl1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 23 10:50:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	311250	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	388190	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	581572	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	499414	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	230092	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	197906	50.65	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 101.30%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	201670	49.89	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 99.78%		
77) toluene-d8 (s)	4.956	98	638571	49.50	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 99.00%		
100) 4-bromofluorobenzene (s)	7.232	95	234609	50.13	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 100.26%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	484231	4826.41	ug/L	100
3) tertiary butyl alcohol	2.319	59	222258	246.60	ug/L	99
4) 1,4-dioxane	4.280	88	106921	1256.86	ug/L	99
7) dichlorodifluoromethane	1.129	85	399517	53.19	ug/L	99
10) chloromethane	1.239	50	410391	50.49	ug/L	99
11) vinyl chloride	1.302	62	321395	47.86	ug/L	99
12) bromomethane	1.485	94	131194	68.55	ug/L	98
13) chloroethane	1.553	64	140142	51.61	ug/L	99
14) trichlorofluoromethane	1.695	101	412739	49.20	ug/L	99
15) vinyl bromide	1.658	106	223967	50.10	ug/L	98
17) ethyl ether	1.852	74	116171	48.29	ug/L	94
18) 2-chloropropane	1.920	43	353537	49.99	ug/L	99
19) acrolein	1.931	56	74885	53.29	ug/L	98
20) freon 113	1.989	151	140305	48.04	ug/L	99
21) 1,1-dichloroethene	1.989	61	337185	44.78	ug/L	100
22) acetone	2.010	58	116288	202.65	ug/L	99
24) iodomethane	2.083	142	186902	61.46	ug/L	100
25) carbon disulfide	2.125	76	590965	50.94	ug/L	99
26) methylene chloride	2.272	84	235996	46.00	ug/L	97
27) methyl acetate	2.183	43	238131	47.20	ug/L	99
28) methyl tert butyl ether	2.424	73	1422976	100.61	ug/L	96
29) trans-1,2-dichloroethene	2.429	96	213077	46.84	ug/L	98
30) hexane	2.592	56	133497	48.46	ug/L	100
31) di-isopropyl ether	2.696	45	802499	50.12	ug/L	99
32) ethyl tert-butyl ether	2.922	59	749337	50.37	ug/L	99
33) 1,1-dichloroethane	2.691	63	459246	48.27	ug/L	99
34) chloroprene	2.733	53	344284	50.29	ug/L	97
35) acrylonitrile	2.403	53	135341	55.93	ug/L	99
36) vinyl acetate	2.681	86	41481	56.46	ug/L	# 79
37) ethyl acetate	3.042	45	57238	50.58	ug/L	98
38) 2-butanone	3.027	72	153187	206.81	ug/L	99
39) 2,2-dichloropropane	3.048	77	318667	48.37	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49947.D
 Acq On : 21 Apr 2018 2:24 am
 Operator : JessicaP
 Sample : icv1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 23 10:50:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) cis-1,2-dichloroethene	3.037	96	258544	49.46	ug/L	99
41) propionitrile	3.069	54	569135	497.72	ug/L	99
42) methyl acrylate	3.074	85	51673	52.13	ug/L	97
43) bromochloromethane	3.189	128	123166	52.94	ug/L	95
44) tetrahydrofuran	3.200	71	44718	49.86	ug/L	99
45) chloroform	3.247	83	460889	48.35	ug/L	100
47) methacrylonitrile	3.163	67	131718	52.47	ug/L	99
48) 1,1,1-trichloroethane	3.362	97	367592	47.41	ug/L	99
49) cyclohexane	3.409	84	298447	52.00	ug/L	97
50) 1,1-dichloropropene	3.462	75	340023	48.27	ug/L	99
51) carbon tetrachloride	3.462	119	299378	47.82	ug/L	99
52) isobutyl alcohol	3.509	43	174738	538.05	ug/L	99
53) tert-amyl alcohol	3.588	55	77174	253.75	ug/L	95
56) n-butyl alcohol	3.960	56	595139	2764.73	ug/L	99
57) benzene	3.598	78	932304	48.58	ug/L	99
58) tert-amyl methyl ether	3.677	73	721647	50.61	ug/L	98
59) iso-octane	3.672	57	564738	47.53	ug/L	99
60) heptane	3.782	57	129442	52.54	ug/L	99
61) isopropyl acetate	3.609	87	51358	52.47	ug/L #	89
62) 1,2-dichloroethane	3.624	62	355799	48.41	ug/L	99
63) trichloroethene	4.044	95	254691	48.87	ug/L	99
64) ethyl acrylate	4.091	55	423821	54.15	ug/L	100
65) 2-nitropropane	4.584	43	86428	56.37	ug/L	98
66) 2-chloroethyl vinyl ether	4.626	63	836571	290.86	ug/L	99
67) methyl methacrylate	4.259	69	204941	53.96	ug/L	99
68) 1,2-dichloropropane	4.233	63	272323	48.90	ug/L	99
69) methylcyclohexane	4.217	83	330878	48.51	ug/L #	72
70) dibromomethane	4.290	93	201539	51.50	ug/L	93
71) bromodichloromethane	4.416	83	367234	50.57	ug/L	99
72) epichlorohydrin	4.663	57	165699	262.23	ug/L	99
73) cis-1,3-dichloropropene	4.746	75	429334	52.53	ug/L	99
74) 4-methyl-2-pentanone	4.862	58	557913	213.88	ug/L	97
75) 3-methyl-1-butanol	4.904	70	196907	1103.16	ug/L	99
78) toluene	5.014	92	549234	48.13	ug/L	100
79) ethyl methacrylate	5.239	69	352175	53.16	ug/L	98
80) trans-1,3-dichloropropene	5.192	75	381714	51.35	ug/L	99
81) 1,1,2-trichloroethane	5.355	83	226902	49.63	ug/L	96
82) 2-hexanone	5.533	58	561690	210.52	ug/L	98
84) 1,3-dichloropropane	5.491	76	388043	51.21	ug/L	99
85) butyl acetate	5.633	56	215281	53.89	ug/L	99
86) dibromochloromethane	5.664	129	294490	54.29	ug/L	100
87) 1,2-dibromoethane	5.769	107	293242	51.42	ug/L	99
88) n-butyl ether	6.293	57	997192	50.14	ug/L	99
89) chlorobenzene	6.188	112	591814	48.97	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	226326	52.61	ug/L	97
91) ethylbenzene	6.277	91	1054310	50.37	ug/L	99
92) m,p-xylene	6.398	106	750455	100.16	ug/L	99
93) o-xylene	6.739	91	820632	50.49	ug/L	98
94) styrene	6.760	104	643682	53.27	ug/L	99
95) butyl acrylate	6.707	56	269320	56.59	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49947.D
 Acq On : 21 Apr 2018 2:24 am
 Operator : JessicaP
 Sample : icv1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 23 10:50:50 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

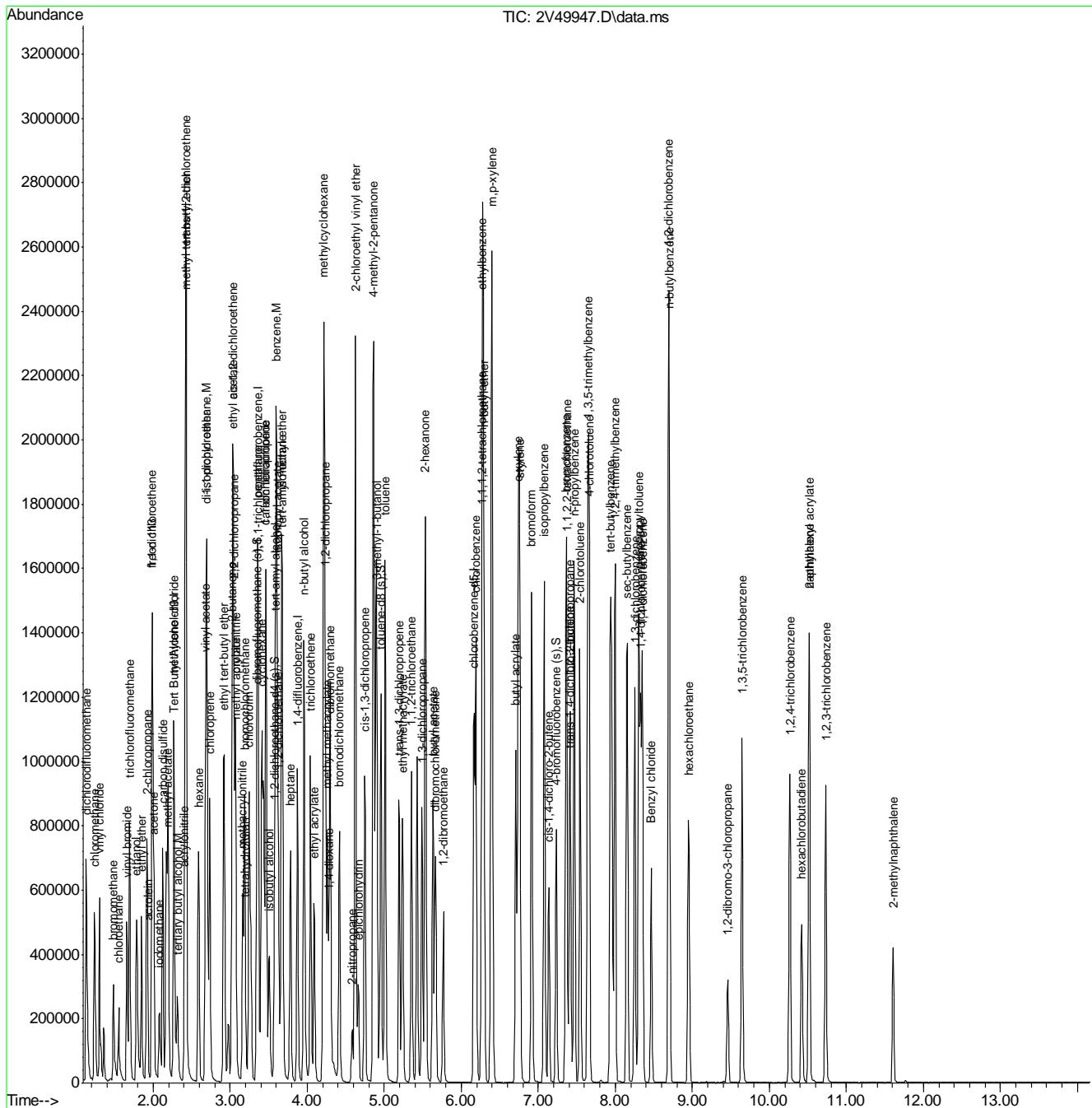
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) bromoform	6.912	173	207139	57.95	ug/L	100
97) isopropylbenzene	7.080	105	935064	50.82	ug/L	100
98) cis-1,4-dichloro-2-butene	7.137	88	115814	54.31	ug/L	98
101) bromobenzene	7.363	156	248586	50.70	ug/L	96
102) 1,1,2,2-tetrachloroethane	7.368	83	394036	50.02	ug/L	99
103) trans-1,4-dichloro-2-b...	7.405	53	93237	57.61	ug/L	98
104) 1,2,3-trichloropropane	7.415	110	84575	51.30	ug/L	94
105) n-propylbenzene	7.468	91	1155552	50.66	ug/L	99
106) 2-chlorotoluene	7.541	126	218639	49.92	ug/L	95
107) 4-chlorotoluene	7.662	126	226444	50.86	ug/L	98
109) 1,3,5-trimethylbenzene	7.646	105	741429	51.36	ug/L	99
110) tert-butylbenzene	7.939	119	740337	64.10	ug/L	97
111) 1,2,4-trimethylbenzene	7.997	105	772325	48.41	ug/L	100
112) sec-butylbenzene	8.154	105	920241	51.78	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	423130	50.57	ug/L	97
114) p-isopropyltoluene	8.306	119	724068	52.27	ug/L	100
115) 1,4-dichlorobenzene	8.354	146	431640	50.07	ug/L	99
116) 1,2-dichlorobenzene	8.694	146	417660	51.03	ug/L	99
118) n-butylbenzene	8.700	92	389123	52.38	ug/L	100
120) 1,2-dibromo-3-chloropr...	9.460	157	71306	55.41	ug/L	98
121) 1,3,5-trichlorobenzene	9.643	180	281876	52.17	ug/L	98
122) 1,2,4-trichlorobenzene	10.267	180	258841	53.79	ug/L	98
123) hexachlorobutadiene	10.419	225	88601	49.83	ug/L	98
124) naphthalene	10.519	128	843076	53.69	ug/L	100
125) 1,2,3-trichlorobenzene	10.734	180	239896	52.47	ug/L	99
126) hexachloroethane	8.951	201	115563	54.22	ug/L	99
127) Benzyl chloride	8.469	91	429424	43.90	ug/L	99
128) 2-ethylhexyl acrylate	10.519	70	38020	12.00	ug/L	98
129) 2-methylnaphthalene	11.610	142	164398	26.80	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992
Data File : 2V49947.D
Acq On : 21 Apr 2018 2:24 am
Operator : JessicaP
Sample : icv1992-50
Misc : MS25736,V2V1992,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 23 10:50:50 2018
Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
QLast Update : Mon Apr 23 10:50:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49948.D
 Acq On : 21 Apr 2018 2:50 am
 Operator : JessicaP
 Sample : icvl1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 23 10:43:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:39:43 2018
 Response via : Initial Calibration

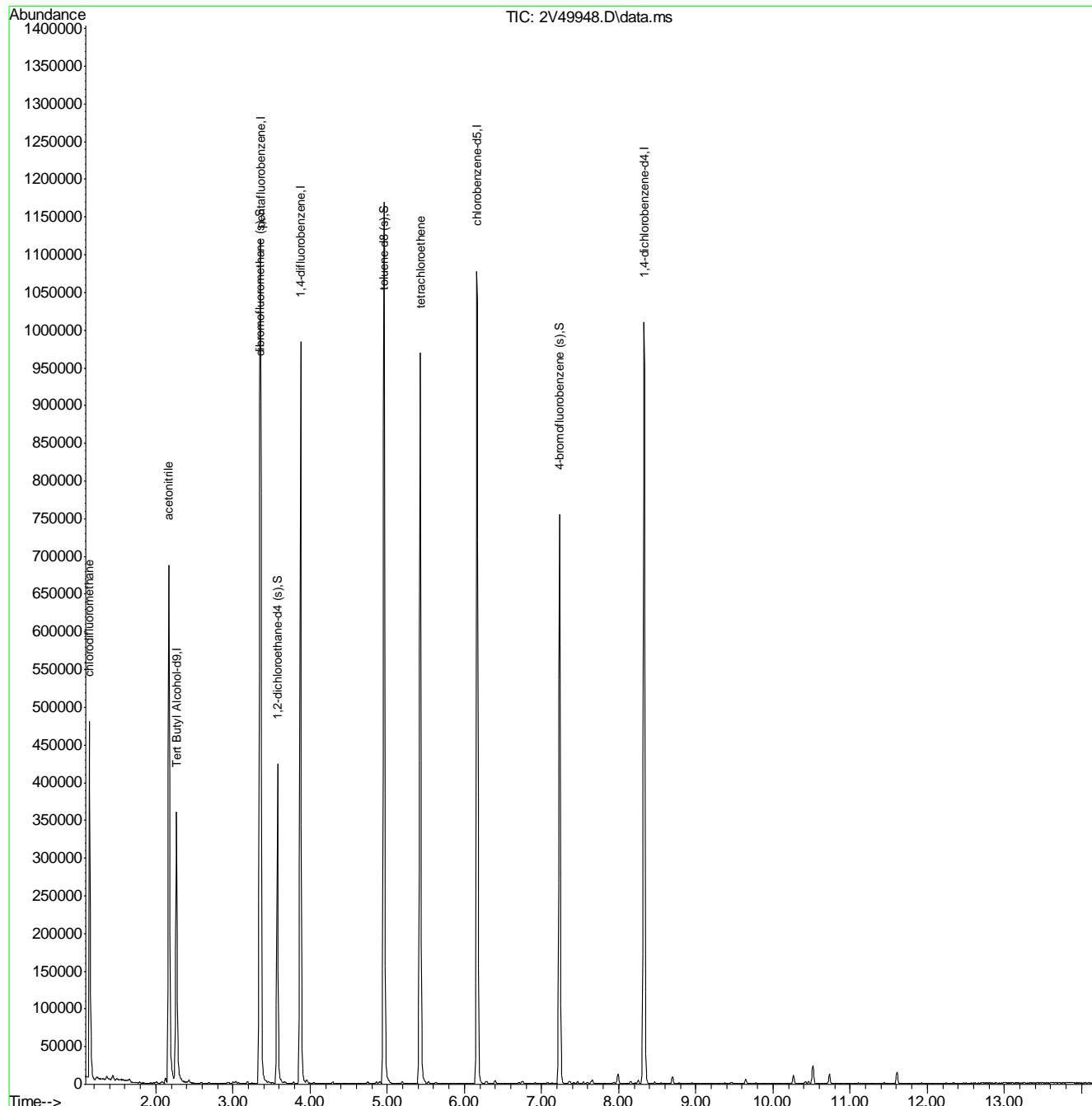
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	314377	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	390880	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	575231	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	478278	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	217104	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	194839	49.52	ug/L	0.00
Spiked Amount 50.000 Range 76 - 120			Recovery	=	99.04%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	203834	50.98	ug/L	0.00
Spiked Amount 50.000 Range 64 - 135			Recovery	=	101.96%	
77) toluene-d8 (s)	4.956	98	615949	49.85	ug/L	0.00
Spiked Amount 50.000 Range 76 - 117			Recovery	=	99.70%	
100) 4-bromofluorobenzene (s)	7.232	95	224602	50.86	ug/L	0.00
Spiked Amount 50.000 Range 72 - 122			Recovery	=	101.72%	
<hr/>						
Target Compounds						
6) chlorodifluoromethane	1.139	51	362515	58.68	ug/L	96
23) acetonitrile	2.167	41	477010	517.18	ug/L	99
83) tetrachloroethene	5.428	164	172767	49.16	ug/L	97
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49948.D
 Acq On : 21 Apr 2018 2:50 am
 Operator : JessicaP
 Sample : icvl1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 23 10:43:44 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:39:43 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49952.D
 Acq On : 23 Apr 2018 9:14 am
 Operator : JessicaP
 Sample : icvl1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:44:28 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:39:43 2018
 Response via : Initial Calibration

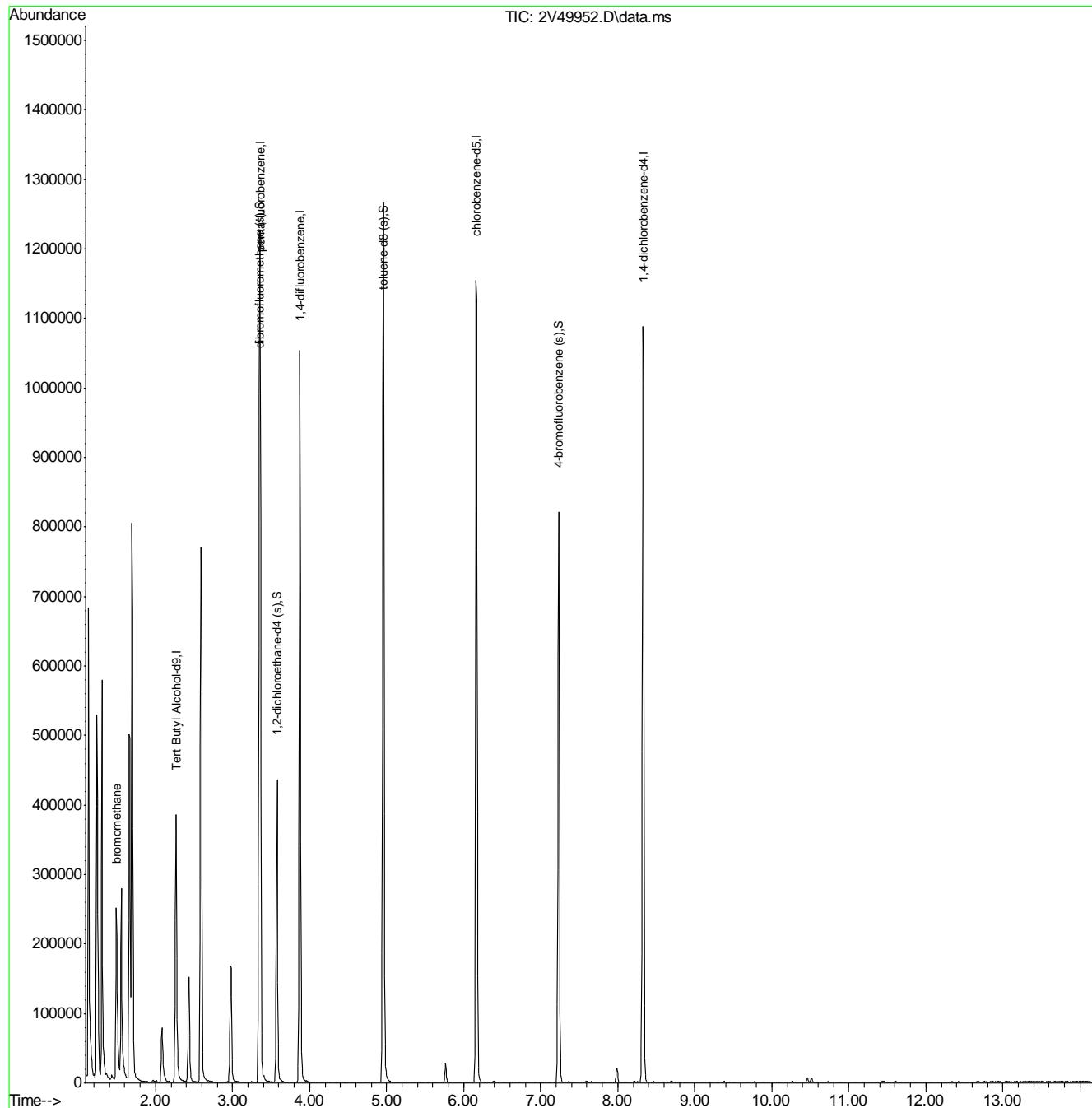
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	2.267	65	335666	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	424336	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	625737	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	515382	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.328	152	232102	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	208436	48.80	ug/L	0.00
Spiked Amount 50.000 Range 76 - 120			Recovery	=	97.60%	
55) 1,2-dichloroethane-d4 (s)	3.577	65	212476	48.86	ug/L	0.00
Spiked Amount 50.000 Range 64 - 135			Recovery	=	97.72%	
77) toluene-d8 (s)	4.956	98	667742	50.15	ug/L	0.00
Spiked Amount 50.000 Range 76 - 117			Recovery	=	100.30%	
100) 4-bromofluorobenzene (s)	7.232	95	241466	51.15	ug/L	0.00
Spiked Amount 50.000 Range 72 - 122			Recovery	=	102.30%	
<hr/>						
Target Compounds						
12) bromomethane	1.491	94	116055	49.71	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V2V1992\
 Data File : 2V49952.D
 Acq On : 23 Apr 2018 9:14 am
 Operator : JessicaP
 Sample : icv1992-50
 Misc : MS25736,V2V1992,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 23 10:44:28 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:39:43 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50456.d
 Acq On : 9 May 2018 10:22 am
 Operator : JessicaP
 Sample : CC1992-20 Inst : MS2V
 Misc : MS26108,V2V2014,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:47:29 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	270066	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	334272	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	507892	50.00	ug/L	0.00
76) chlorobenzene-d5	6.167	117	423433	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	187370	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.346	113	187880	55.83	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 111.66%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	207331	58.73	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 117.46%		
77) toluene-d8 (s)	4.956	98	567856	51.91	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 103.82%		
100) 4-bromofluorobenzene (s)	7.232	95	200055	52.49	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 104.98%		
Target Compounds						
				Qvalue		
2) ethanol	1.784	45	187862	2157.99	ug/L	98
3) tertiary butyl alcohol	2.314	59	91200	116.62	ug/L	92
4) 1,4-dioxane	4.280	88	37524	508.36	ug/L	92
6) chlorodifluoromethane	1.139	51	97003	18.36	ug/L	99
7) dichlorodifluoromethane	1.129	85	95442	14.76	ug/L	99
10) chloromethane	1.239	50	135442	19.35	ug/L	98
11) vinyl chloride	1.302	62	120839	20.90	ug/L	99
12) bromomethane	1.490	94	67458	33.54	ug/L	98
13) chloroethane	1.553	64	51437	22.00	ug/L	96
14) trichlorofluoromethane	1.695	101	145632	20.16	ug/L	99
15) vinyl bromide	1.658	106	84251	21.89	ug/L	98
17) ethyl ether	1.852	74	44771	21.61	ug/L	96
18) 2-chloropropane	1.920	43	148035	24.31	ug/L	97
19) acrolein	1.931	56	25666	21.21	ug/L	97
20) freon 113	1.994	151	56497	22.46	ug/L	91
21) 1,1-dichloroethene	1.988	61	154953	23.90	ug/L	97
22) acetone	2.009	58	42970	86.96	ug/L	88
23) acetonitrile	2.167	41	175208	222.13	ug/L	99
24) iodomethane	2.083	142	60506	25.86	ug/L	99
25) carbon disulfide	2.125	76	219894	22.01	ug/L	96
26) methylene chloride	2.272	84	92131	20.86	ug/L	90
27) methyl acetate	2.182	43	103367	23.79	ug/L	94
28) methyl tert butyl ether	2.424	73	267848	21.99	ug/L	97
29) trans-1,2-dichloroethene	2.429	96	86056	21.97	ug/L	99
30) hexane	2.591	56	51288	21.62	ug/L	96
31) di-isopropyl ether	2.702	45	319094	23.14	ug/L	93
32) ethyl tert-butyl ether	2.922	59	272451	21.27	ug/L	99
33) 1,1-dichloroethane	2.691	63	185467	22.64	ug/L	99
34) chloroprene	2.733	53	139694	23.70	ug/L	96
35) acrylonitrile	2.403	53	45018	21.60	ug/L	96
36) vinyl acetate	2.681	86	14202	22.45	ug/L	98
37) ethyl acetate	3.042	45	21863	22.44	ug/L	95
38) 2-butanone	3.021	72	54901	86.07	ug/L #	83
39) 2,2-dichloropropane	3.048	77	144089	25.40	ug/L	99
40) cis-1,2-dichloroethene	3.037	96	97325	21.62	ug/L	96
41) propionitrile	3.063	54	218206	221.61	ug/L	77
42) methyl acrylate	3.074	85	18406	21.56	ug/L	100
43) bromochloromethane	3.189	128	44724	22.32	ug/L	91
44) tetrahydrofuran	3.194	71	15576	20.17	ug/L #	78

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50456.d
 Acq On : 9 May 2018 10:22 am
 Operator : JessicaP
 Sample : CC1992-20 Inst : MS2V
 Misc : MS26108,V2V2014,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:47:29 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
45) chloroform	3.247	83	178830	21.79	ug/L	96
47) methacrylonitrile	3.163	67	47747	22.09	ug/L	83
48) 1,1,1-trichloroethane	3.362	97	149525	22.40	ug/L	# 61
49) cyclohexane	3.409	84	96057	19.43	ug/L	95
50) 1,1-dichloropropene	3.467	75	132945	21.92	ug/L	98
51) carbon tetrachloride	3.462	119	115049	21.34	ug/L	96
52) isobutyl alcohol	3.504	43	70622	252.53	ug/L	96
53) tert-amyl alcohol	3.582	55	29425	112.36	ug/L	# 83
56) n-butyl alcohol	3.955	56	222094	1181.42	ug/L	94
57) benzene	3.598	78	349883	20.88	ug/L	98
58) tert-amyl methyl ether	3.672	73	258240	20.74	ug/L	98
59) iso-octane	3.672	57	217172	20.93	ug/L	97
60) heptane	3.782	57	45363	21.08	ug/L	91
61) isopropyl acetate	3.609	87	17891	20.93	ug/L	# 70
62) 1,2-dichloroethane	3.624	62	145204	22.62	ug/L	98
63) trichloroethylene	4.044	95	92995	20.43	ug/L	99
64) ethyl acrylate	4.091	55	154337	22.58	ug/L	99
65) 2-nitropropane	4.584	43	35632	26.61	ug/L	98
66) 2-chloroethyl vinyl ether	4.626	63	70718	28.15	ug/L	97
67) methyl methacrylate	4.259	69	74118	22.35	ug/L	84
68) 1,2-dichloropropane	4.233	63	108216	22.25	ug/L	99
69) methylcyclohexane	4.217	83	116658	19.58	ug/L	94
70) dibromomethane	4.290	93	73937	21.64	ug/L	92
71) bromodichloromethane	4.416	83	143297	22.59	ug/L	99
72) epichlorohydrin	4.662	57	60837	110.25	ug/L	99
73) cis-1,3-dichloropropene	4.746	75	158575	22.22	ug/L	91
74) 4-methyl-2-pentanone	4.862	58	205827	90.35	ug/L	# 84
75) 3-methyl-1-butanol	4.898	70	70230	450.54	ug/L	94
78) toluene	5.014	92	198261	20.49	ug/L	97
79) ethyl methacrylate	5.239	69	127012	22.61	ug/L	91
80) trans-1,3-dichloropropene	5.192	75	146780	23.29	ug/L	94
81) 1,1,2-trichloroethane	5.355	83	82079	21.18	ug/L	94
82) 2-hexanone	5.533	58	199232	88.07	ug/L	93
83) tetrachloroethylene	5.428	164	68023	21.86	ug/L	98
84) 1,3-dichloropropane	5.491	76	138120	21.50	ug/L	99
85) butyl acetate	5.632	56	73345	21.66	ug/L	93
86) dibromochloromethane	5.664	129	110227	23.97	ug/L	100
87) 1,2-dibromoethane	5.769	107	106789	22.09	ug/L	100
88) n-butyl ether	6.293	57	373046	22.12	ug/L	99
89) chlorobenzene	6.188	112	217437	21.22	ug/L	97
90) 1,1,1,2-tetrachloroethane	6.267	131	84498	23.17	ug/L	99
91) ethylbenzene	6.277	91	389298	21.93	ug/L	100
92) m,p-xylene	6.398	106	272238	42.86	ug/L	97
93) o-xylene	6.739	91	300093	21.78	ug/L	99
94) styrene	6.754	104	228599	22.31	ug/L	97
95) butyl acrylate	6.707	56	91222	22.61	ug/L	97
96) bromoform	6.912	173	73397	24.22	ug/L	99
97) isopropylbenzene	7.079	105	338646	21.71	ug/L	98
98) cis-1,4-dichloro-2-butene	7.137	88	47503	26.27	ug/L	97
101) bromobenzene	7.357	156	86831	21.75	ug/L	91
102) 1,1,2,2-tetrachloroethane	7.368	83	145831	22.73	ug/L	99
103) trans-1,4-dichloro-2-b...	7.405	53	36465	27.67	ug/L	94
104) 1,2,3-trichloropropane	7.415	110	30051	22.38	ug/L	97
105) n-propylbenzene	7.467	91	424586	22.86	ug/L	100
106) 2-chlorotoluene	7.541	126	79909	22.41	ug/L	91
107) 4-chlorotoluene	7.661	126	79113	21.82	ug/L	96
109) 1,3,5-trimethylbenzene	7.646	105	264028	22.46	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
 Data File : 2v50456.d
 Acq On : 9 May 2018 10:22 am
 Operator : JessicaP
 Sample : CC1992-20 Inst : MS2V
 Misc : MS26108,V2V2014,5,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 10 21:47:29 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:50:09 2018
 Response via : Initial Calibration

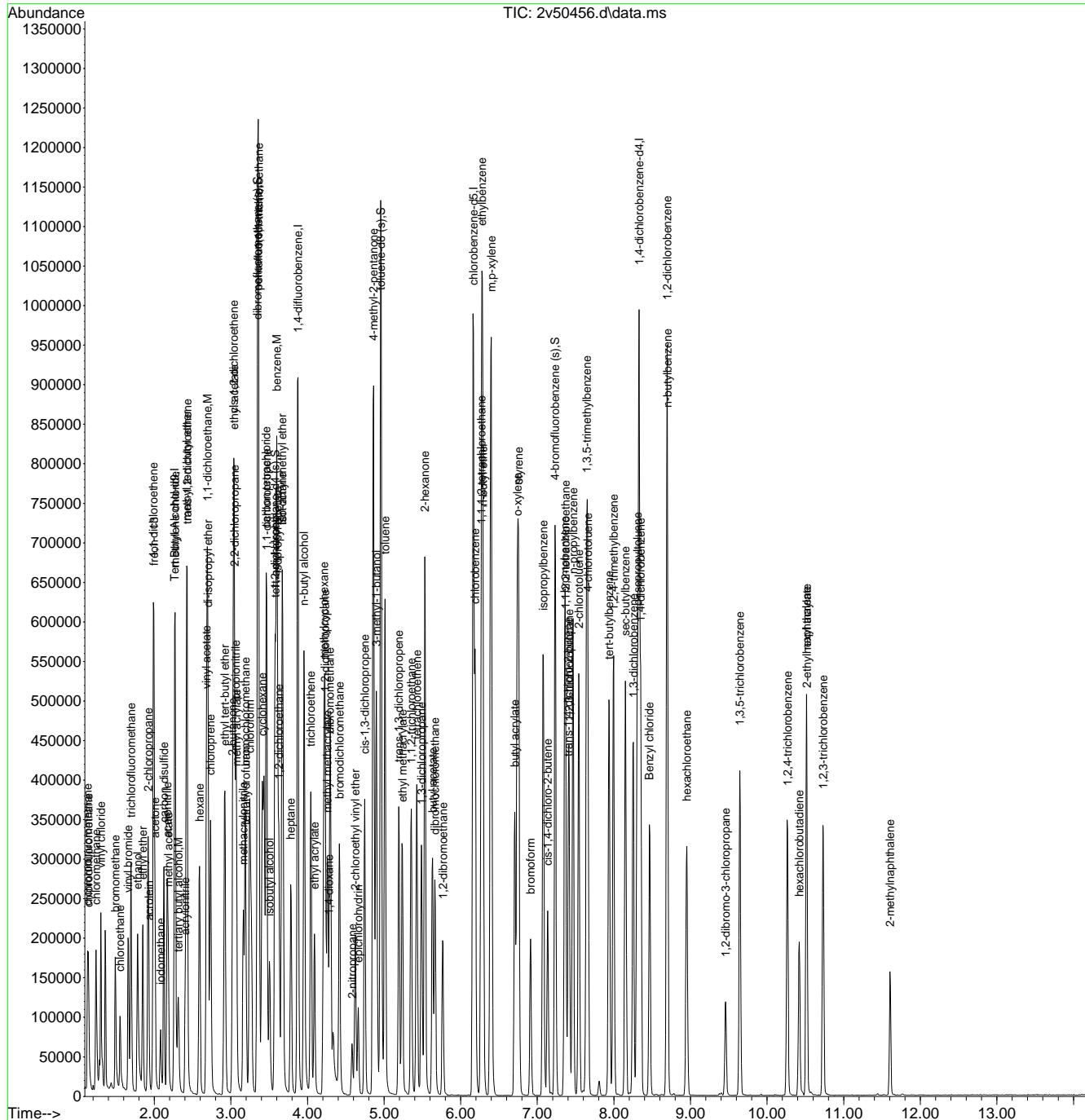
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	7.939	119	206859	21.99	ug/L	97
111) 1,2,4-trimethylbenzene	7.997	105	269495	20.74	ug/L	99
112) sec-butylbenzene	8.149	105	325998	22.52	ug/L	99
113) 1,3-dichlorobenzene	8.254	146	150108	22.03	ug/L	100
114) p-isopropyltoluene	8.306	119	255182	22.62	ug/L	100
115) 1,4-dichlorobenzene	8.348	146	152372	21.71	ug/L	98
116) 1,2-dichlorobenzene	8.694	146	148559	22.29	ug/L	98
118) n-butylbenzene	8.700	92	142313	23.53	ug/L	99
120) 1,2-dibromo-3-chloropr...	9.460	157	24592	23.47	ug/L	97
121) 1,3,5-trichlorobenzene	9.643	180	97244	22.10	ug/L	98
122) 1,2,4-trichlorobenzene	10.267	180	88012	22.46	ug/L	99
123) hexachlorobutadiene	10.419	225	31437	21.71	ug/L	96
124) naphthalene	10.514	128	283418	22.16	ug/L	99
125) 1,2,3-trichlorobenzene	10.734	180	85939	23.08	ug/L	99
126) hexachloroethane	8.951	201	40472	23.32	ug/L	99
127) Benzyl chloride	8.464	91	209237	26.27	ug/L	98
128) 2-ethylhexyl acrylate	10.519	70	11673	4.52	ug/L	95
129) 2-methylnaphthalene	11.604	142	55912	11.19	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-11-18\v2v2014\
Data File : 2v50456.d
Acq On : 9 May 2018 10:22 am
Operator : JessicaP
Sample : CC1992-20 Inst : MS2V
Misc : MS26108,V2V2014,5,,,.1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
Quant Results File: M2V1992.RES
Quant Time: May 10 21:47:29 2018
Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
QLast Update : Mon Apr 23 10:50:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5-11-18\v2v2015\
 Data File : 2v50477.d
 Acq On : 10 May 2018 6:26 am
 Operator : JessicaP
 Sample : cc1992-20 Inst : MS2V
 Misc : MS26169,V2V2015,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 11 11:12:10 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	2.266	65	240709	500.00	ug/L	0.00
5) pentafluorobenzene	3.357	168	325821	50.00	ug/L	0.00
54) 1,4-difluorobenzene	3.876	114	481897	50.00	ug/L	0.00
76) chlorobenzene-d5	6.162	117	369253	50.00	ug/L	0.00
99) 1,4-dichlorobenzene-d4	8.327	152	172869	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	3.347	113	173646	52.94	ug/L	0.00
Spiked Amount 50.000	Range 76 - 120		Recovery	= 105.88%		
55) 1,2-dichloroethane-d4 (s)	3.577	65	191438	57.16	ug/L	0.00
Spiked Amount 50.000	Range 64 - 135		Recovery	= 114.32%		
77) toluene-d8 (s)	4.956	98	482934	50.63	ug/L	0.00
Spiked Amount 50.000	Range 76 - 117		Recovery	= 101.26%		
100) 4-bromofluorobenzene (s)	7.232	95	177350	50.44	ug/L	0.00
Spiked Amount 50.000	Range 72 - 122		Recovery	= 100.88%		
Target Compounds						
2) ethanol	1.784	45	166587	2146.99	ug/L	99
3) tertiary butyl alcohol	2.314	59	75431	108.22	ug/L	91
4) 1,4-dioxane	4.275	88	32754	497.86	ug/L	98
6) chlorodifluoromethane	1.139	51	96127	18.67	ug/L	98
7) dichlorodifluoromethane	1.129	85	132496	21.02	ug/L	99
10) chloromethane	1.239	50	144231	21.14	ug/L	99
11) vinyl chloride	1.302	62	122928	21.81	ug/L	100
12) bromomethane	1.490	94	42877	20.26	ug/L	94
13) chloroethane	1.553	64	54937	24.10	ug/L	96
14) trichlorofluoromethane	1.695	101	132922	18.88	ug/L	97
15) vinyl bromide	1.664	106	66838	17.81	ug/L	98
17) ethyl ether	1.847	74	37444	18.54	ug/L	91
18) 2-chloropropane	1.920	43	133301	22.46	ug/L	96
19) acrolein	1.931	56	22277	18.89	ug/L	100
20) freon 113	1.989	151	45996	18.76	ug/L	98
21) 1,1-dichloroethene	1.989	61	131465	20.80	ug/L	94
22) acetone	2.010	58	36720	76.24	ug/L #	79
23) acetonitrile	2.167	41	164743	214.28	ug/L	98
24) iodomethane	2.083	142	34176	16.34	ug/L	90
25) carbon disulfide	2.125	76	186265	19.13	ug/L	94
26) methylene chloride	2.272	84	75949	17.64	ug/L	84
27) methyl acetate	2.183	43	92659	21.88	ug/L	93
28) methyl tert butyl ether	2.424	73	226111	19.05	ug/L	96
29) trans-1,2-dichloroethene	2.429	96	68014	17.81	ug/L	91
30) hexane	2.592	56	48697	21.06	ug/L	91
31) di-isopropyl ether	2.696	45	292430	21.76	ug/L	97
32) ethyl tert-butyl ether	2.922	59	239551	19.18	ug/L	99
33) 1,1-dichloroethane	2.691	63	157785	19.76	ug/L	97
34) chloroprene	2.733	53	120576	20.98	ug/L	91
35) acrylonitrile	2.403	53	41183	20.28	ug/L	95
36) vinyl acetate	2.681	86	11443	18.56	ug/L #	37
37) ethyl acetate	3.042	45	18456	19.43	ug/L	97
38) 2-butanone	3.021	72	44503	71.58	ug/L #	82
39) 2,2-dichloropropane	3.042	77	124180	22.46	ug/L	100
40) cis-1,2-dichloroethene	3.037	96	80497	18.35	ug/L	95
41) propionitrile	3.063	54	176332	183.73	ug/L	79
42) methyl acrylate	3.074	85	15646	18.81	ug/L #	86
43) bromochloromethane	3.184	128	38541	19.74	ug/L	89
44) tetrahydrofuran	3.194	71	13735	18.25	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5-11-18\v2v2015\
 Data File : 2v50477.d
 Acq On : 10 May 2018 6:26 am
 Operator : JessicaP
 Sample : cc1992-20 Inst : MS2V
 Misc : MS26169,V2V2015,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 11 11:12:10 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
45) chloroform	3.247	83	152949	19.12	ug/L	99
47) methacrylonitrile	3.163	67	39258	18.63	ug/L	93
48) 1,1,1-trichloroethane	3.362	97	131146	20.15	ug/L #	49
49) cyclohexane	3.409	84	77903	16.17	ug/L	97
50) 1,1-dichloropropene	3.462	75	110740	18.73	ug/L	99
51) carbon tetrachloride	3.462	119	111775	21.27	ug/L	98
52) isobutyl alcohol	3.504	43	53026	194.53	ug/L	98
53) tert-amyl alcohol	3.582	55	25171	98.61	ug/L	94
56) n-butyl alcohol	3.955	56	176129	987.45	ug/L	92
57) benzene	3.598	78	295096	18.56	ug/L	99
58) tert-amyl methyl ether	3.672	73	224739	19.02	ug/L	97
59) iso-octane	3.672	57	194884	19.79	ug/L	94
60) heptane	3.782	57	42213	20.68	ug/L	95
61) isopropyl acetate	3.609	87	15691	19.34	ug/L #	84
62) 1,2-dichloroethane	3.624	62	128596	21.12	ug/L	99
63) trichloroethylene	4.044	95	80795	18.71	ug/L	100
64) ethyl acrylate	4.091	55	126555	19.51	ug/L	99
65) 2-nitropropane	4.579	43	30998	24.40	ug/L	96
66) 2-chloroethyl vinyl ether	4.626	63	39271	16.48	ug/L	99
67) methyl methacrylate	4.259	69	61734	19.62	ug/L	88
68) 1,2-dichloropropane	4.233	63	88598	19.20	ug/L	99
69) methylcyclohexane	4.217	83	105772	18.71	ug/L	95
70) dibromomethane	4.290	93	64510	19.90	ug/L	95
71) bromodichloromethane	4.416	83	125165	20.80	ug/L	99
72) epichlorohydrin	4.663	57	49435	94.42	ug/L	99
73) cis-1,3-dichloropropene	4.746	75	133568	19.72	ug/L	93
74) 4-methyl-2-pentanone	4.857	58	128470	59.44	ug/L	92
75) 3-methyl-1-butanol	4.898	70	45994	310.98	ug/L	100
78) toluene	5.014	92	163652	19.40	ug/L	97
79) ethyl methacrylate	5.239	69	109559	22.37	ug/L	93
80) trans-1,3-dichloropropene	5.192	75	128419	23.37	ug/L	97
81) 1,1,2-trichloroethane	5.355	83	71588	21.18	ug/L	98
82) 2-hexanone	5.533	58	178808	90.64	ug/L #	82
83) tetrachloroethylene	5.428	164	53817	19.84	ug/L	97
84) 1,3-dichloropropane	5.491	76	120158	21.45	ug/L	98
85) butyl acetate	5.632	56	66146	22.40	ug/L #	80
86) dibromochloromethane	5.664	129	88198	21.99	ug/L	99
87) 1,2-dibromoethane	5.764	107	87993	20.87	ug/L	97
88) n-butyl ether	6.288	57	333384	22.67	ug/L	97
89) chlorobenzene	6.188	112	175617	19.65	ug/L	96
90) 1,1,1,2-tetrachloroethane	6.267	131	68856	21.65	ug/L	96
91) ethylbenzene	6.277	91	321740	20.79	ug/L	98
92) m,p-xylene	6.398	106	223241	40.30	ug/L	98
93) o-xylene	6.739	91	252983	21.05	ug/L	99
94) styrene	6.755	104	189915	21.26	ug/L	96
95) butyl acrylate	6.707	56	82780	23.53	ug/L	96
96) bromoform	6.912	173	60224	22.79	ug/L	99
97) isopropylbenzene	7.074	105	278610	20.48	ug/L	97
98) cis-1,4-dichloro-2-butene	7.137	88	33195	21.05	ug/L	94
101) bromobenzene	7.357	156	72899	19.79	ug/L	95
102) 1,1,2,2-tetrachloroethane	7.368	83	126145	21.31	ug/L	99
103) trans-1,4-dichloro-2-b...	7.405	53	27102	22.29	ug/L	93
104) 1,2,3-trichloropropane	7.415	110	25951	20.95	ug/L	97
105) n-propylbenzene	7.468	91	360386	21.03	ug/L	99
106) 2-chlorotoluene	7.541	126	67301	20.45	ug/L	94
107) 4-chlorotoluene	7.662	126	66962	20.02	ug/L	99
109) 1,3,5-trimethylbenzene	7.646	105	225394	20.78	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5-11-18\v2v2015\
 Data File : 2v50477.d
 Acq On : 10 May 2018 6:26 am
 Operator : JessicaP
 Sample : cc1992-20 Inst : MS2V
 Misc : MS26169,V2V2015,5,,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
 Quant Results File: M2V1992.RES
 Quant Time: May 11 11:12:10 2018
 Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
 QLast Update : Mon Apr 23 10:38:21 2018
 Response via : Initial Calibration

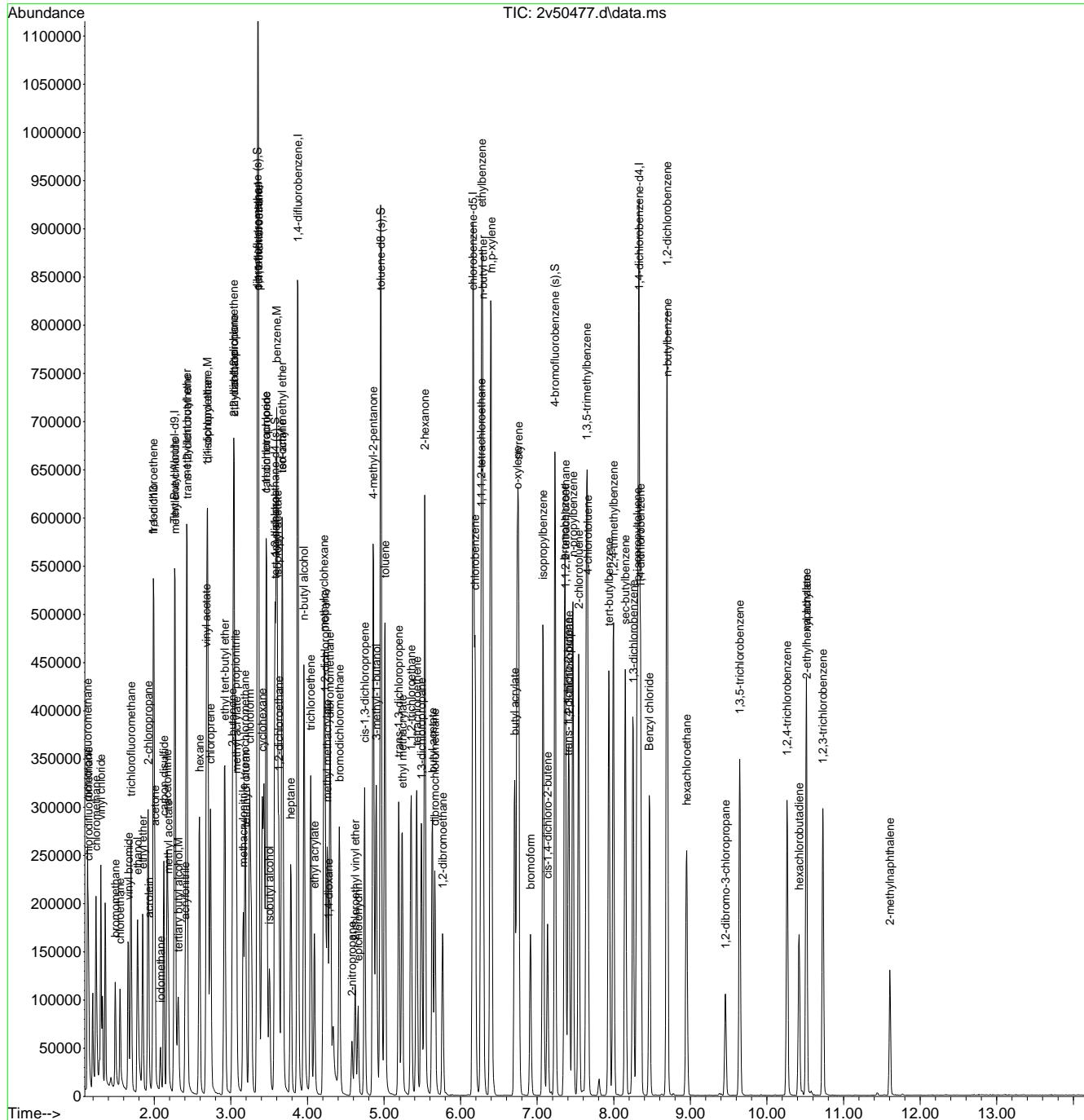
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
110) tert-butylbenzene	7.934	119	174376	20.09	ug/L	96
111) 1,2,4-trimethylbenzene	7.997	105	230335	19.22	ug/L	99
112) sec-butylbenzene	8.149	105	277434	20.78	ug/L	97
113) 1,3-dichlorobenzene	8.254	146	126683	20.15	ug/L	97
114) p-isopropyltoluene	8.306	119	215421	20.70	ug/L	97
115) 1,4-dichlorobenzene	8.348	146	131812	20.35	ug/L	98
116) 1,2-dichlorobenzene	8.694	146	125723	20.45	ug/L	98
118) n-butylbenzene	8.700	92	119687	21.44	ug/L	99
120) 1,2-dibromo-3-chloropr...	9.460	157	21253	21.98	ug/L	94
121) 1,3,5-trichlorobenzene	9.643	180	82719	20.38	ug/L	99
122) 1,2,4-trichlorobenzene	10.262	180	75105	20.77	ug/L	95
123) hexachlorobutadiene	10.419	225	26763	20.03	ug/L	96
124) naphthalene	10.514	128	239695	20.32	ug/L	100
125) 1,2,3-trichlorobenzene	10.729	180	72498	21.11	ug/L	98
126) hexachloroethane	8.951	201	32789	20.48	ug/L	94
127) Benzyl chloride	8.464	91	187451	25.51	ug/L	98
128) 2-ethylhexyl acrylate	10.519	70	9252	3.89	ug/L #	85
129) 2-methylnaphthalene	11.604	142	45472	9.87	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\nizele\5-11-18\v2v2015\
Data File : 2v50477.d
Acq On : 10 May 2018 6:26 am
Operator : JessicaP
Sample : cc1992-20 Inst : MS2V
Misc : MS26169,V2V2015,5,,,.1
ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M2V1992.M
Quant Results File: M2V1992.RES
Quant Time: May 11 11:12:10 2018
Quant Title : SW 846 Method 8260C, ZB624 (60m x 0.25mm x 1.4um)
QLast Update : Mon Apr 23 10:38:21 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81323.D
 Acq On : 25 Apr 2018 4:54 pm
 Operator : HueanhT
 Sample : IC3370-0.5
 Misc : MS25764,V4B3370,,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:50:44 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.78	65	141498	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	250013	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	322421	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	325715	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	219975	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	113325	50.55	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.10%
55) 1,2-dichloroethane-d4 (s)	9.21	65	106012	50.61	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	101.22%
76) toluene-d8 (s)	11.24	98	382129	48.43	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.86%
99) 4-bromofluorobenzene (s)	14.10	95	156213	48.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.82%

Target Compounds

				Qvalue
6) chlorodifluoromethane	3.91	51	3293	0.53 ug/L 90
7) dichlorodifluoromethane	3.90	85	2912	0.45 ug/L 86
8) chloromethane	4.25	50	4387	0.56 ug/L 91
9) vinyl chloride	4.46	62	4226	0.58 ug/L 86
13) trichlorofluoromethane	5.54	101	3827	0.55 ug/L 87
14) vinyl bromide	5.43	106	2571	0.54 ug/L # 67
15) ethyl ether	5.81	74	549	0.38 ug/L # 32
16) 2-chloropropane	6.03	43	3316	0.58 ug/L 97
18) freon 113	6.24	151	1417	0.45 ug/L # 78
19) 1,1-dichloroethene	6.20	61	2918	0.56 ug/L 95
22) iodomethane	6.44	142	3040	0.52 ug/L 82
23) carbon disulfide	6.58	76	6125	0.55 ug/L 97
26) methyl tert butyl ether	7.13	73	5574	0.57 ug/L 90
27) trans-1,2-dichloroethene	7.16	61	2624	0.57 ug/L 85
28) hexane	7.44	56	1009	0.49 ug/L # 77
29) di-isopropyl ether	7.64	45	6343	0.57 ug/L 87
31) 1,1-dichloroethane	7.66	63	3155	0.58 ug/L 81
32) chloroprene	7.75	53	1997	0.53 ug/L 69
35) ethyl tert-butyl ether	8.05	59	5749	0.55 ug/L 97
37) 2,2-dichloropropane	8.35	77	3057	0.56 ug/L 86
38) cis-1,2-dichloroethene	8.30	96	1748	0.54 ug/L 92
39) propionitrile	8.32	54	1821	4.72 ug/L 90
42) bromochloromethane	8.58	128	696	0.45 ug/L 96
44) chloroform	8.64	83	2672	0.54 ug/L 94
45) tert-butyl formate	8.68	59	1355	0.46 ug/L 83
47) 1,1,1-trichloroethane	8.90	97	2870	0.53 ug/L 82
50) 1,1-dichloropropene	9.04	75	1765	0.54 ug/L 88
51) carbon tetrachloride	9.08	117	2368	0.52 ug/L # 72
58) benzene	9.27	78	5688	0.55 ug/L 92
59) tert-amyl methyl ether	9.33	73	5032	0.55 ug/L 85
60) heptane	9.49	57	1103	0.54 ug/L # 58
63) trichloroethene	9.94	95	1331	0.54 ug/L # 81
64) 2-chloroethyl vinyl ether	10.70	63	3299	2.41 ug/L 86

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81323.D
 Acq On : 25 Apr 2018 4:54 pm
 Operator : HueanhT
 Sample : IC3370-0.5
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:50:44 2018
 Response via : Initial Calibration

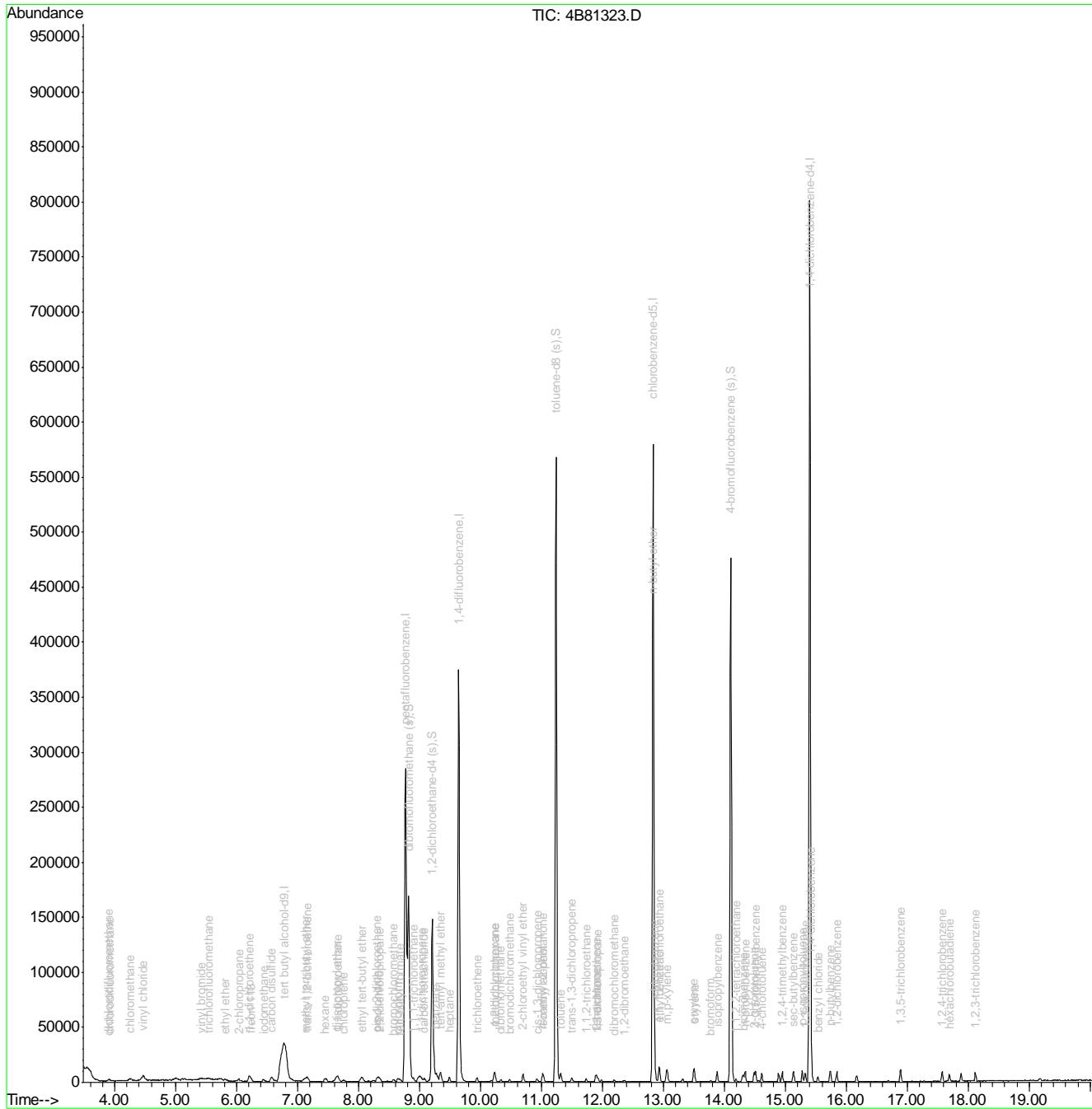
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) methylcyclohexane	10.24	83	3275	0.54	ug/L	93
67) 1,2-dichloropropane	10.23	63	1624	0.59	ug/L	89
68) dibromomethane	10.33	93	758	0.50	ug/L	82
69) bromodichloromethane	10.48	83	1726	0.51	ug/L	89
72) cis-1,3-dichloropropene	10.93	75	2127	0.55	ug/L	87
73) 4-methyl-2-pentanone	11.02	58	1816	1.93	ug/L	90
74) isoamyl alcohol	11.02	70	713	9.24	ug/L #	77
77) toluene	11.31	92	3322	0.52	ug/L	94
79) trans-1,3-dichloropropene	11.50	75	1620	0.48	ug/L	94
80) 1,1,2-trichloroethane	11.73	83	898	0.47	ug/L #	74
81) tetrachloroethene	11.89	164	1154	0.48	ug/L	98
82) 2-hexanone	11.90	58	1316	1.63	ug/L #	71
83) 1,3-dichloropropane	11.92	76	1720	0.49	ug/L	93
85) dibromochloromethane	12.18	129	1189	0.45	ug/L	99
86) 1,2-dibromoethane	12.36	107	1284	0.51	ug/L	98
87) n-butyl ether	12.82	57	5964	0.50	ug/L	58
88) chlorobenzene	12.86	112	3712	0.51	ug/L	90
89) 1,1,1,2-tetrachloroethane	12.94	131	1545	0.49	ug/L	86
90) ethylbenzene	12.93	91	6573	0.53	ug/L	96
91) m,p-xylene	13.06	106	4939	1.02	ug/L	97
92) o-xylene	13.50	91	5631	0.52	ug/L	93
93) styrene	13.51	104	3752	0.48	ug/L	99
95) isopropylbenzene	13.88	105	6958	0.49	ug/L	96
96) bromoform	13.77	173	908	0.48	ug/L	91
100) 1,1,2,2-tetrachloroethane	14.19	83	1834	0.50	ug/L	91
103) bromobenzene	14.31	156	2033	0.53	ug/L	84
104) n-propylbenzene	14.34	91	8263	0.50	ug/L	95
105) 2-chlorotoluene	14.49	126	1857	0.52	ug/L	93
106) 4-chlorotoluene	14.61	91	4909	0.51	ug/L	92
108) 1,3,5-trimethylbenzene	14.52	105	6070	0.49	ug/L	94
110) 1,2,4-trimethylbenzene	14.95	105	5605	0.45	ug/L	93
111) sec-butylbenzene	15.14	105	7484	0.44	ug/L	97
112) p-isopropyltoluene	15.28	119	6534	0.45	ug/L	97
113) 1,3-dichlorobenzene	15.33	146	4053	0.53	ug/L	97
114) 1,4-dichlorobenzene	15.43	146	4379	0.56	ug/L	91
115) 1,2-dichlorobenzene	15.84	146	4408	0.53	ug/L	96
116) benzyl chloride	15.54	91	3637	0.51	ug/L	97
118) n-butylbenzene	15.73	92	3309	0.44	ug/L	82
122) 1,3,5-trichlorobenzene	16.90	180	4490	0.51	ug/L	97
123) 1,2,4-trichlorobenzene	17.58	180	3753	0.49	ug/L	90
125) hexachlorobutadiene	17.69	225	1911	0.51	ug/L	93
127) 1,2,3-trichlorobenzene	18.12	180	3247	0.46	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81323.D
Acq On : 25 Apr 2018 4:54 pm
Operator : HueanhT
Sample : IC3370-0.5
Misc : MS25764,V4B3370,5,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 26 08:08:02 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 07:50:44 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144462	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	245872	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	321107	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	320138	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	216549	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	110740	50.23	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.46%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	107902	51.72	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 103.44%	
76) toluene-d8 (s)	11.24	98	380617	49.08	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.16%	
99) 4-bromofluorobenzene (s)	14.10	95	155559	49.48	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.96%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.90	59	1973	5.23 ug/L 78
6) chlorodifluoromethane	3.92	51	6329	1.03 ug/L 92
7) dichlorodifluoromethane	3.90	85	6366	1.00 ug/L 83
8) chloromethane	4.25	50	8341	1.08 ug/L 95
9) vinyl chloride	4.46	62	7612	1.05 ug/L 90
12) chloroethane	5.13	64	4502	1.15 ug/L 88
13) trichlorofluoromethane	5.54	101	7592	1.11 ug/L 93
14) vinyl bromide	5.42	106	5341	1.15 ug/L 92
15) ethyl ether	5.83	74	1601	1.12 ug/L # 63
16) 2-chloropropane	6.02	43	6396	1.14 ug/L 98
18) freon 113	6.23	151	3185	1.03 ug/L # 67
19) 1,1-dichloroethene	6.20	61	5459	1.07 ug/L 91
20) acetone	6.19	58	858	3.76 ug/L # 1
22) iodomethane	6.43	142	6150	1.07 ug/L 91
23) carbon disulfide	6.57	76	11988	1.09 ug/L 92
24) methylene chloride	6.82	84	4622	1.24 ug/L 98
25) methyl acetate	6.58	43	2022	1.07 ug/L 61
26) methyl tert butyl ether	7.13	73	10111	1.06 ug/L 97
27) trans-1,2-dichloroethene	7.16	61	4818	1.07 ug/L 96
28) hexane	7.45	56	1955	0.97 ug/L 88
29) di-isopropyl ether	7.64	45	11491	1.04 ug/L 93
30) 2-butanone	8.23	72	688	3.15 ug/L # 4
31) 1,1-dichloroethane	7.67	63	5517	1.03 ug/L 98
32) chloroprene	7.76	53	3752	1.00 ug/L 96
35) ethyl tert-butyl ether	8.05	59	10277	1.01 ug/L 93
37) 2,2-dichloropropane	8.34	77	5931	1.11 ug/L 97
38) cis-1,2-dichloroethene	8.31	96	3313	1.04 ug/L 98
39) propionitrile	8.31	54	3897	10.27 ug/L 98
42) bromochloromethane	8.57	128	1536	1.02 ug/L 88
44) chloroform	8.64	83	5458	1.11 ug/L 96
45) tert-butyl formate	8.69	59	2918	1.01 ug/L 87
47) 1,1,1-trichloroethane	8.89	97	5670	1.07 ug/L 96
48) cyclohexane	9.00	84	7376	1.23 ug/L 95

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) 1,1-dichloropropene	9.04	75	3293	1.03	ug/L	95
51) carbon tetrachloride	9.08	117	4491	1.00	ug/L	95
57) 2,2,4-trimethylpentane	9.35	57	11971	1.00	ug/L	95
58) benzene	9.27	78	10976	1.07	ug/L	96
59) tert-amyl methyl ether	9.33	73	9355	1.02	ug/L	96
60) heptane	9.48	57	2016	0.99	ug/L	84
61) 1,2-dichloroethane	9.30	62	3803	1.26	ug/L	99
62) ethyl acrylate	9.92	55	2304	0.96	ug/L	82
63) trichloroethene	9.94	95	2468	1.00	ug/L	89
64) 2-chloroethyl vinyl ether	10.70	63	6525	4.79	ug/L	97
66) methylcyclohexane	10.24	83	5567	0.92	ug/L	94
67) 1,2-dichloropropane	10.23	63	2837	1.04	ug/L	81
68) dibromomethane	10.33	93	1461	0.97	ug/L	96
69) bromodichloromethane	10.47	83	3439	1.02	ug/L	90
72) cis-1,3-dichloropropene	10.92	75	3871	1.00	ug/L	88
73) 4-methyl-2-pentanone	11.02	58	3857	4.11	ug/L #	84
74) isoamyl alcohol	11.02	70	1609	20.93	ug/L	88
77) toluene	11.31	92	6423	1.03	ug/L	99
78) ethyl methacrylate	11.49	69	2455	0.88	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	3206	0.97	ug/L	92
80) 1,1,2-trichloroethane	11.73	83	1873	1.00	ug/L	95
81) tetrachloroethene	11.88	164	2450	1.04	ug/L	93
82) 2-hexanone	11.90	58	3097	3.90	ug/L	89
83) 1,3-dichloropropane	11.92	76	3811	1.10	ug/L	93
85) dibromochloromethane	12.19	129	2559	0.98	ug/L	90
86) 1,2-dibromoethane	12.36	107	2526	1.01	ug/L	82
87) n-butyl ether	12.81	57	11189	0.94	ug/L	94
88) chlorobenzene	12.86	112	7470	1.05	ug/L	95
89) 1,1,1,2-tetrachloroethane	12.94	131	3148	1.01	ug/L	94
90) ethylbenzene	12.93	91	12614	1.03	ug/L	99
91) m,p-xylene	13.06	106	9736	2.04	ug/L	92
92) o-xylene	13.50	91	10466	0.98	ug/L	94
93) styrene	13.51	104	7154	0.94	ug/L	86
94) butyl acrylate	13.30	55	4121	0.88	ug/L	93
95) isopropylbenzene	13.88	105	12889	0.93	ug/L	99
96) bromoform	13.77	173	1604	0.87	ug/L	98
100) 1,1,2,2-tetrachloroethane	14.19	83	3643	1.02	ug/L	83
102) 1,2,3-trichloropropane	14.29	110	804	0.94	ug/L	98
103) bromobenzene	14.31	156	3745	1.00	ug/L	95
104) n-propylbenzene	14.34	91	16195	1.00	ug/L	96
105) 2-chlorotoluene	14.49	126	3543	1.00	ug/L	97
106) 4-chlorotoluene	14.62	91	9469	1.01	ug/L	91
108) 1,3,5-trimethylbenzene	14.52	105	11563	0.95	ug/L	95
110) 1,2,4-trimethylbenzene	14.95	105	11324	0.93	ug/L	94
111) sec-butylbenzene	15.13	105	14845	0.89	ug/L	99
112) p-isopropyltoluene	15.28	119	12814	0.90	ug/L	97
113) 1,3-dichlorobenzene	15.33	146	7758	1.02	ug/L	93
114) 1,4-dichlorobenzene	15.43	146	8070	1.06	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	8319	1.02	ug/L	94
116) benzyl chloride	15.53	91	7092	1.01	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
118) n-butylbenzene	15.73	92	6451	0.88	ug/L	92
121) 1,2-dibromo-3-chloropropan	16.69	157	925	0.91	ug/L	91
122) 1,3,5-trichlorobenzene	16.89	180	8408	0.96	ug/L	87
123) 1,2,4-trichlorobenzene	17.58	180	7040	0.93	ug/L	95
125) hexachlorobutadiene	17.69	225	3589	0.98	ug/L	94
127) 1,2,3-trichlorobenzene	18.11	180	6385	0.93	ug/L	92

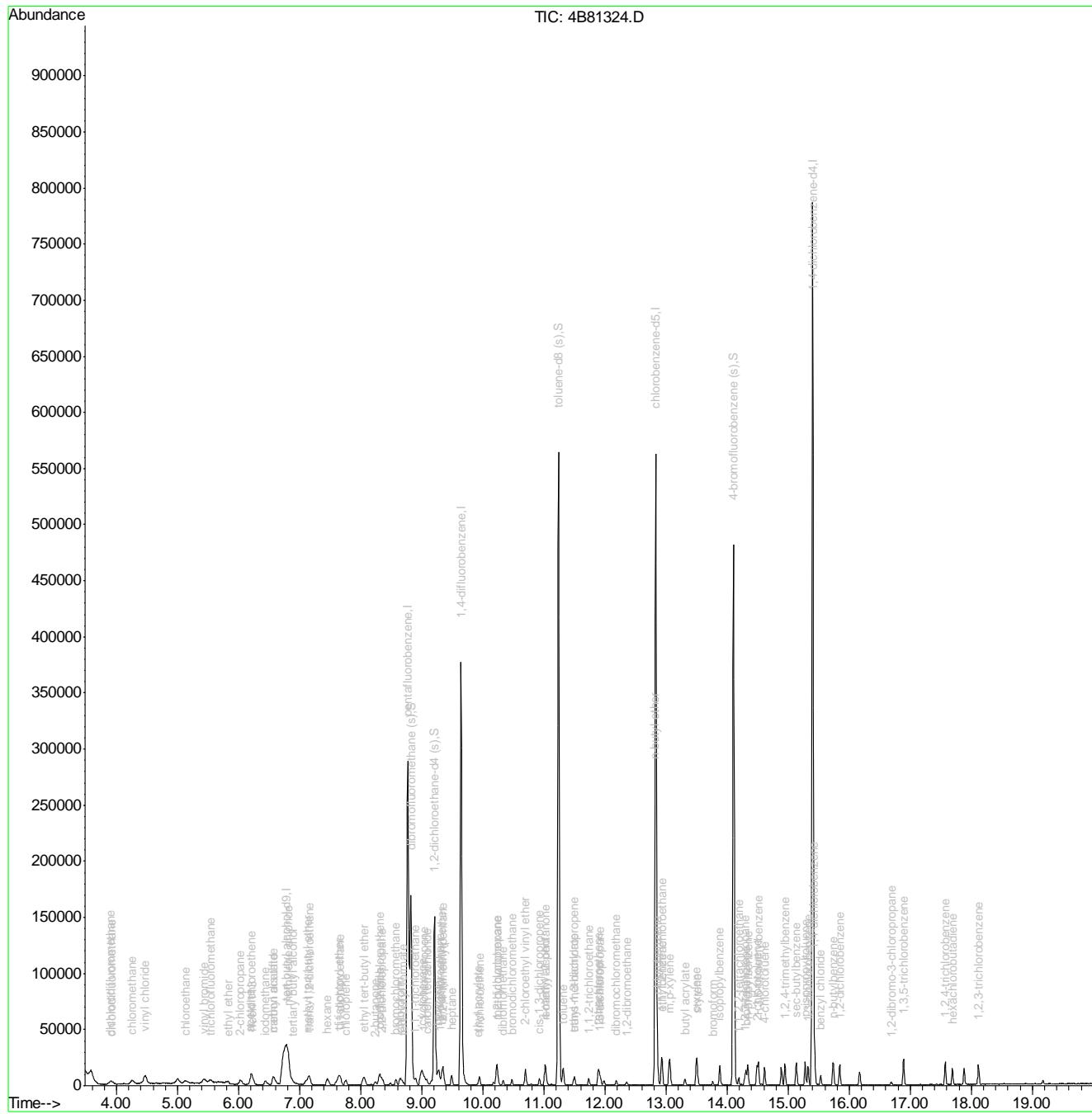
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.6

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81324.D
 Acq On : 25 Apr 2018 5:22 pm
 Operator : HueanhT
 Sample : IC3370-1
 Misc : MS25764,V4B3370,,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 26 08:30:08 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 07:52:42 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144863	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	238073	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	306503	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	304875	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	201842	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	106794	50.03	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.06%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	102037	51.24	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 102.48%	
76) toluene-d8 (s)	11.24	98	365559	49.49	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.98%	
99) 4-bromofluorobenzene (s)	14.10	95	144456	49.29	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.58%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.86	59	3255	8.59 ug/L 78
4) 1,4-dioxane	10.27	88	1497	42.97 ug/L 79
6) chlorodifluoromethane	3.90	51	11812	1.99 ug/L 91
7) dichlorodifluoromethane	3.89	85	14424	2.35 ug/L 96
8) chloromethane	4.24	50	17697	2.38 ug/L 95
9) vinyl chloride	4.46	62	16448	2.35 ug/L 96
11) bromomethane	5.00	94	13002	2.72 ug/L 95
12) chloroethane	5.13	64	9111	2.51 ug/L 99
13) trichlorofluoromethane	5.54	101	15296	2.31 ug/L 95
14) vinyl bromide	5.41	106	10064	2.23 ug/L 95
15) ethyl ether	5.81	74	2610	1.89 ug/L # 63
16) 2-chloropropane	6.03	43	11030	2.03 ug/L 95
17) acrolein	6.03	56	1139	1.92 ug/L 66
18) freon 113	6.23	151	5977	1.99 ug/L 92
19) 1,1-dichloroethene	6.20	61	10068	2.03 ug/L 98
20) acetone	6.22	58	1809	8.14 ug/L # 39
22) iodomethane	6.44	142	10639	1.91 ug/L 99
23) carbon disulfide	6.57	76	20487	1.92 ug/L 94
24) methylene chloride	6.82	84	6719	1.85 ug/L 93
25) methyl acetate	6.59	43	3728	1.99 ug/L 83
26) methyl tert butyl ether	7.12	73	16842	1.82 ug/L 95
27) trans-1,2-dichloroethene	7.16	61	8687	2.00 ug/L 93
28) hexane	7.45	56	3773	1.94 ug/L # 77
29) di-isopropyl ether	7.64	45	19906	1.86 ug/L 94
30) 2-butanone	8.22	72	1433	6.77 ug/L # 22
31) 1,1-dichloroethane	7.67	63	10374	1.99 ug/L 97
32) chloroprene	7.75	53	6731	1.86 ug/L 97
33) acrylonitrile	7.08	53	1549	1.58 ug/L 90
35) ethyl tert-butyl ether	8.05	59	17780	1.80 ug/L 97
37) 2,2-dichloropropane	8.34	77	10498	2.03 ug/L 98
38) cis-1,2-dichloroethene	8.30	96	5860	1.90 ug/L 91
39) propionitrile	8.30	54	6788	18.47 ug/L 98
41) methacrylonitrile	8.48	67	1348	1.67 ug/L # 70

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
42) bromochloromethane	8.57	128	2716	1.86	ug/L	89
44) chloroform	8.64	83	9083	1.91	ug/L	91
45) tert-butyl formate	8.68	59	5030	1.79	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	9600	1.87	ug/L	97
48) cyclohexane	9.01	84	10761	1.99	ug/L	99
50) 1,1-dichloropropene	9.04	75	5969	1.93	ug/L	90
51) carbon tetrachloride	9.08	117	8760	2.23	ug/L #	83
57) 2,2,4-trimethylpentane	9.35	57	21676	1.89	ug/L	96
58) benzene	9.27	78	18594	1.89	ug/L	97
59) tert-amyl methyl ether	9.33	73	16232	1.85	ug/L	94
60) heptane	9.49	57	3604	1.86	ug/L	97
61) 1,2-dichloroethane	9.30	62	5680	1.96	ug/L	94
62) ethyl acrylate	9.92	55	3583	1.57	ug/L	82
63) trichloroethene	9.94	95	4500	1.91	ug/L	75
64) 2-chloroethyl vinyl ether	10.70	63	11635	8.96	ug/L	97
66) methylcyclohexane	10.24	83	11321	1.97	ug/L	87
67) 1,2-dichloropropane	10.22	63	4845	1.86	ug/L	92
68) dibromomethane	10.33	93	2692	1.87	ug/L	93
69) bromodichloromethane	10.48	83	5825	1.81	ug/L	84
71) epichlorohydrin	10.80	57	1792	8.45	ug/L	96
72) cis-1,3-dichloropropene	10.93	75	6685	1.81	ug/L	99
73) 4-methyl-2-pentanone	11.02	58	6598	7.36	ug/L	86
74) isoamyl alcohol	11.02	70	2543	34.65	ug/L #	87
77) toluene	11.31	92	11195	1.88	ug/L	99
78) ethyl methacrylate	11.48	69	4285	1.62	ug/L	91
79) trans-1,3-dichloropropene	11.50	75	5606	1.79	ug/L	97
80) 1,1,2-trichloroethane	11.73	83	3200	1.80	ug/L	95
81) tetrachloroethene	11.89	164	4223	1.88	ug/L	93
82) 2-hexanone	11.90	58	5455	7.21	ug/L	93
83) 1,3-dichloropropane	11.92	76	6354	1.93	ug/L	92
84) butyl acetate	11.98	56	2413	1.71	ug/L	92
85) dibromochloromethane	12.18	129	4343	1.74	ug/L	98
86) 1,2-dibromoethane	12.36	107	4338	1.83	ug/L	82
87) n-butyl ether	12.81	57	19505	1.73	ug/L	92
88) chlorobenzene	12.86	112	12828	1.89	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	5481	1.85	ug/L	95
90) ethylbenzene	12.93	91	21767	1.87	ug/L	95
91) m,p-xylene	13.06	106	16681	3.68	ug/L	96
92) o-xylene	13.50	91	18118	1.79	ug/L	98
93) styrene	13.51	104	12345	1.70	ug/L	94
94) butyl acrylate	13.31	55	7209	1.62	ug/L	95
95) isopropylbenzene	13.88	105	23542	1.78	ug/L	99
96) bromoform	13.77	173	2995	1.70	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	5925	1.78	ug/L	97
102) 1,2,3-trichloropropane	14.29	110	1620	1.96	ug/L #	69
103) bromobenzene	14.31	156	6245	1.79	ug/L	96
104) n-propylbenzene	14.34	91	28322	1.88	ug/L	97
105) 2-chlorotoluene	14.48	126	6015	1.82	ug/L	91
106) 4-chlorotoluene	14.61	91	16675	1.90	ug/L	95
108) 1,3,5-trimethylbenzene	14.52	105	20336	1.80	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81325.D
 Acq On : 25 Apr 2018 5:50 pm
 Operator : HueanhT
 Sample : IC3370-2
 Misc : MS25764,V4B3370,,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:19:55 2018
 Response via : Initial Calibration

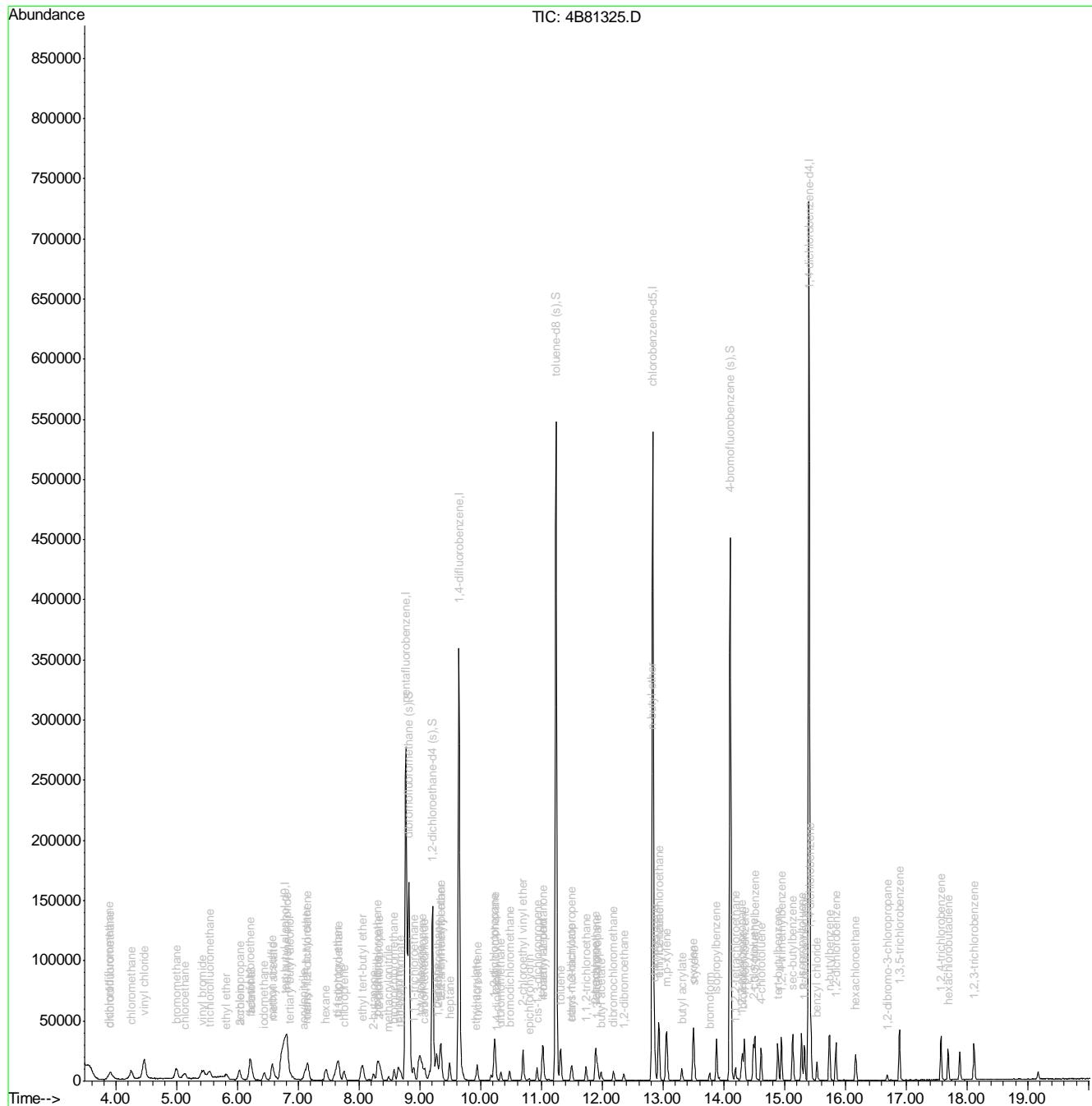
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
109) tert-butylbenzene	14.89	119	16495	1.67	ug/L	93
110) 1,2,4-trimethylbenzene	14.95	105	20569	1.81	ug/L	99
111) sec-butylbenzene	15.13	105	27798	1.80	ug/L	99
112) p-isopropyltoluene	15.28	119	22680	1.72	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	13657	1.93	ug/L	98
114) 1,4-dichlorobenzene	15.43	146	13196	1.86	ug/L	97
115) 1,2-dichlorobenzene	15.84	146	14142	1.86	ug/L	98
116) benzyl chloride	15.53	91	11312	1.73	ug/L	97
118) n-butylbenzene	15.74	92	11934	1.74	ug/L	95
120) hexachloroethane	16.17	201	3862	1.53	ug/L	88
121) 1,2-dibromo-3-chloropropan	16.69	157	1512	1.60	ug/L	88
122) 1,3,5-trichlorobenzene	16.89	180	14611	1.79	ug/L	95
123) 1,2,4-trichlorobenzene	17.57	180	11802	1.67	ug/L	97
125) hexachlorobutadiene	17.69	225	6173	1.81	ug/L	96
127) 1,2,3-trichlorobenzene	18.11	180	10885	1.70	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81325.D
Acq On : 25 Apr 2018 5:50 pm
Operator : HueanhT
Sample : IC3370-2
Misc : MS25764,V4B3370,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 26 08:29:49 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:19:55 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.78	65	148775	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	256138	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	333845	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	327666	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	222993	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	114595	49.90	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.80%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	113382	52.28	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 104.56%	
76) toluene-d8 (s)	11.24	98	389490	49.07	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.14%	
99) 4-bromofluorobenzene (s)	14.10	95	159130	49.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.30%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.87	59	9270	23.81 ug/L 95
4) 1,4-dioxane	10.27	88	3986	111.41 ug/L 90
6) chlorodifluoromethane	3.91	51	29219	4.57 ug/L 96
7) dichlorodifluoromethane	3.90	85	33034	5.01 ug/L 95
8) chloromethane	4.25	50	39554	4.94 ug/L 94
9) vinyl chloride	4.47	62	36021	4.79 ug/L 97
10) 1,3-butadiene	4.48	54	21612	5.04 ug/L 91
11) bromomethane	5.00	94	27348	5.06 ug/L 95
12) chloroethane	5.13	64	19603	4.82 ug/L 97
13) trichlorofluoromethane	5.55	101	34254	4.81 ug/L 94
14) vinyl bromide	5.43	106	23587	4.87 ug/L 91
15) ethyl ether	5.83	74	7087	4.77 ug/L 77
16) 2-chloropropane	6.03	43	27021	4.63 ug/L 95
17) acrolein	6.04	56	3265	5.12 ug/L 78
18) freon 113	6.22	151	14157	4.39 ug/L 95
19) 1,1-dichloroethene	6.21	61	24304	4.56 ug/L 98
20) acetone	6.20	58	4794	20.05 ug/L # 83
21) acetonitrile	6.59	41	25041	50.31 ug/L 96
22) iodomethane	6.43	142	27099	4.52 ug/L 99
23) carbon disulfide	6.57	76	51374	4.49 ug/L 99
24) methylene chloride	6.82	84	18182	4.67 ug/L 97
25) methyl acetate	6.58	43	9778	4.85 ug/L 99
26) methyl tert butyl ether	7.13	73	44719	4.49 ug/L 97
27) trans-1,2-dichloroethene	7.16	61	21677	4.63 ug/L 94
28) hexane	7.46	56	9466	4.53 ug/L # 79
29) di-isopropyl ether	7.64	45	52630	4.58 ug/L 95
30) 2-butanone	8.23	72	4313	18.94 ug/L # 65
31) 1,1-dichloroethane	7.67	63	26515	4.73 ug/L 96
32) chloroprene	7.75	53	17963	4.61 ug/L 92
33) acrylonitrile	7.07	53	5208	4.94 ug/L 90
34) vinyl acetate	7.59	86	1453	4.08 ug/L # 52
35) ethyl tert-butyl ether	8.05	59	47527	4.48 ug/L 97
36) ethyl acetate	8.23	45	1515	4.59 ug/L # 54

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	24410	4.39	ug/L	89
38) cis-1,2-dichloroethene	8.30	96	15545	4.69	ug/L	98
39) propionitrile	8.30	54	20361	51.51	ug/L	92
40) methyl acrylate	8.31	85	1359	4.42	ug/L	# 82
41) methacrylonitrile	8.49	67	4006	4.61	ug/L	91
42) bromochloromethane	8.58	128	7479	4.75	ug/L	95
43) tetrahydrofuran	8.60	72	1137	3.72	ug/L	94
44) chloroform	8.64	83	23930	4.69	ug/L	97
45) tert-butyl formate	8.68	59	13166	4.36	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	24105	4.36	ug/L	91
48) cyclohexane	9.01	84	29032	5.00	ug/L	98
50) 1,1-dichloropropene	9.04	75	15554	4.69	ug/L	98
51) carbon tetrachloride	9.08	117	20720	4.44	ug/L	97
52) tert-amyl alcohol	9.15	73	3760	23.43	ug/L	# 83
53) isopropyl acetate	9.17	87	2044	4.37	ug/L	# 75
56) n-butyl alcohol	9.67	56	18464	219.83	ug/L	95
57) 2,2,4-trimethylpentane	9.35	57	55819	4.48	ug/L	97
58) benzene	9.27	78	49440	4.62	ug/L	97
59) tert-amyl methyl ether	9.33	73	43221	4.53	ug/L	96
60) heptane	9.49	57	9398	4.44	ug/L	97
61) 1,2-dichloroethane	9.30	62	15176	4.82	ug/L	97
62) ethyl acrylate	9.92	55	11343	4.56	ug/L	95
63) trichloroethene	9.94	95	11869	4.64	ug/L	97
64) 2-chloroethyl vinyl ether	10.70	63	33653	23.78	ug/L	97
65) methyl methacrylate	10.17	100	2295	4.08	ug/L	92
66) methylcyclohexane	10.24	83	26738	4.26	ug/L	98
67) 1,2-dichloropropane	10.22	63	13450	4.75	ug/L	92
68) dibromomethane	10.33	93	7823	4.99	ug/L	96
69) bromodichloromethane	10.47	83	16312	4.65	ug/L	96
70) 2-nitropropane	10.67	41	3695	4.71	ug/L	95
71) epichlorohydrin	10.79	57	5490	23.76	ug/L	95
72) cis-1,3-dichloropropene	10.93	75	17883	4.44	ug/L	93
73) 4-methyl-2-pentanone	11.02	58	18829	19.29	ug/L	89
74) isoamyl alcohol	11.02	70	7678	96.06	ug/L	88
77) toluene	11.31	92	28626	4.47	ug/L	91
78) ethyl methacrylate	11.48	69	12802	4.50	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	15681	4.65	ug/L	92
80) 1,1,2-trichloroethane	11.73	83	8877	4.65	ug/L	96
81) tetrachloroethene	11.89	164	10974	4.54	ug/L	99
82) 2-hexanone	11.90	58	16556	20.35	ug/L	97
83) 1,3-dichloropropane	11.92	76	16864	4.77	ug/L	93
84) butyl acetate	11.98	56	7298	4.81	ug/L	95
85) dibromochloromethane	12.18	129	12058	4.50	ug/L	88
86) 1,2-dibromoethane	12.36	107	11378	4.46	ug/L	97
87) n-butyl ether	12.81	57	55165	4.55	ug/L	98
88) chlorobenzene	12.87	112	33435	4.59	ug/L	90
89) 1,1,1,2-tetrachloroethane	12.94	131	13990	4.38	ug/L	99
90) ethylbenzene	12.93	91	57226	4.58	ug/L	100
91) m,p-xylene	13.06	106	44968	9.23	ug/L	93
92) o-xylene	13.50	91	49481	4.54	ug/L	93

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81326.D
 Acq On : 25 Apr 2018 6:18 pm
 Operator : HueanhT
 Sample : IC3370-5
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 26 08:29:34 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:28:49 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	36608	4.70	ug/L	98
94) butyl acrylate	13.31	55	22308	4.66	ug/L	95
95) isopropylbenzene	13.88	105	62466	4.39	ug/L	98
96) bromoform	13.76	173	8363	4.43	ug/L	95
97) cis-1,4-dichloro-2-butene	13.92	88	2191	6.36	ug/L	89
100) 1,1,2,2-tetrachloroethane	14.19	83	17011	4.62	ug/L	98
101) trans-1,4-dichloro-2-butene	14.23	53	1980	3.59	ug/L	97
102) 1,2,3-trichloropropane	14.29	110	4459	4.89	ug/L	92
103) bromobenzene	14.31	156	17657	4.57	ug/L	99
104) n-propylbenzene	14.34	91	75792	4.55	ug/L	98
105) 2-chlorotoluene	14.49	126	16155	4.43	ug/L	97
106) 4-chlorotoluene	14.62	91	45414	4.69	ug/L	97
108) 1,3,5-trimethylbenzene	14.51	105	55116	4.42	ug/L	98
109) tert-butylbenzene	14.89	119	43611	4.00	ug/L	99
110) 1,2,4-trimethylbenzene	14.95	105	58362	4.64	ug/L	98
111) sec-butylbenzene	15.13	105	74340	4.35	ug/L	98
112) p-isopropyltoluene	15.28	119	64361	4.41	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	36779	4.71	ug/L	98
114) 1,4-dichlorobenzene	15.43	146	36017	4.58	ug/L	98
115) 1,2-dichlorobenzene	15.84	146	38596	4.60	ug/L	96
116) benzyl chloride	15.53	91	33006	4.56	ug/L	98
118) n-butylbenzene	15.73	92	33665	4.45	ug/L	94
120) hexachloroethane	16.17	201	10847	3.90	ug/L	93
121) 1,2-dibromo-3-chloropropan	16.69	157	4610	4.40	ug/L	89
122) 1,3,5-trichlorobenzene	16.89	180	39300	4.36	ug/L	99
123) 1,2,4-trichlorobenzene	17.57	180	32325	4.13	ug/L	99
124) 2-ethylhexyl acrylate	17.58	70	2318	1.15	ug/L	99
125) hexachlorobutadiene	17.69	225	16180	4.30	ug/L	96
126) naphthalene	17.88	128	59299	3.83	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	28950	4.08	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81326.D
Acq On : 25 Apr 2018 6:18 pm
Operator : HueanhT
Sample : IC3370-5
Misc : MS25764,V4B3370,5,,,,1
ALS Vial : 7 Sample Multiplier: 1

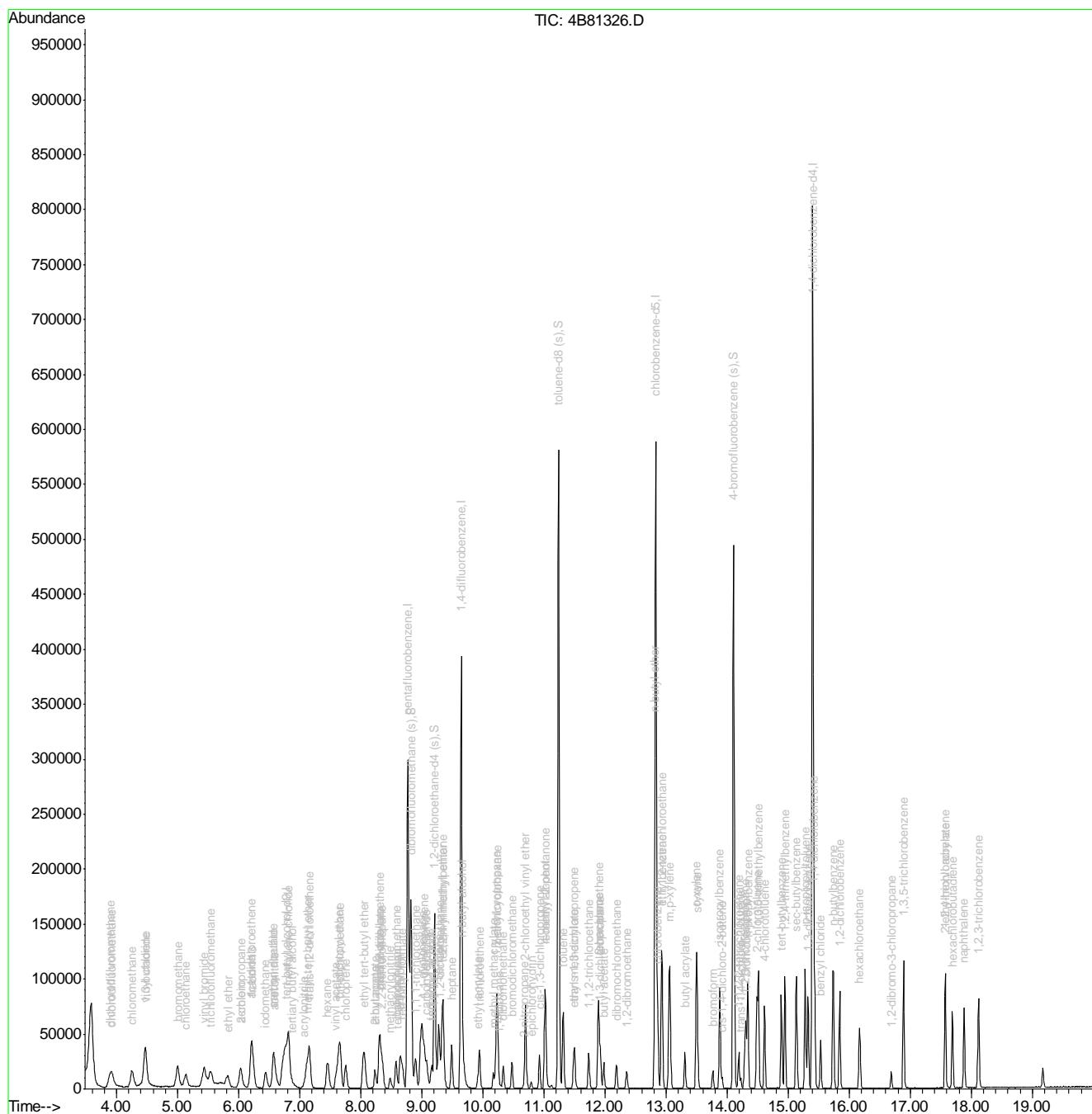
Quant Time: Apr 26 08:29:34 2018

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M

Quant Title : SW846 8260C, Rx1624Sil MS 60m x 0.25mm x 1.4um

Last Update : Thu Apr 26 08:28:49 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	144454	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	242511	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	315545	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	311348	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	208017	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	108226	49.77	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.54%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	105704	51.56	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 103.12%	
76) toluene-d8 (s)	11.24	98	374210	49.61	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.22%	
99) 4-bromofluorobenzene (s)	14.10	95	148733	49.25	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 98.50%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.88	59	19621	51.90 ug/L 97
4) 1,4-dioxane	10.26	88	8899	256.17 ug/L 95
6) chlorodifluoromethane	3.92	51	67577	11.17 ug/L 99
7) dichlorodifluoromethane	3.90	85	70288	11.25 ug/L 96
8) chloromethane	4.25	50	79503	10.48 ug/L 98
9) vinyl chloride	4.46	62	74382	10.44 ug/L 98
10) 1,3-butadiene	4.47	54	42885	10.57 ug/L 98
11) bromomethane	5.00	94	52742	10.30 ug/L 99
12) chloroethane	5.13	64	39294	10.20 ug/L 98
13) trichlorofluoromethane	5.54	101	70661	10.48 ug/L 99
14) vinyl bromide	5.43	106	46732	10.18 ug/L 98
15) ethyl ether	5.82	74	15051	10.71 ug/L 87
16) 2-chloropropane	6.03	43	58929	10.66 ug/L 95
17) acrolein	6.03	56	6057	10.04 ug/L 90
18) freon 113	6.23	151	36006	11.79 ug/L 98
19) 1,1-dichloroethene	6.20	61	53713	10.65 ug/L 97
20) acetone	6.20	58	9507	41.99 ug/L 92
21) acetonitrile	6.58	41	50637	110.04 ug/L 93
22) iodomethane	6.43	142	59619	10.49 ug/L 97
23) carbon disulfide	6.57	76	115752	10.68 ug/L 99
24) methylene chloride	6.82	84	38090	10.32 ug/L 99
25) methyl acetate	6.58	43	20256	10.62 ug/L 96
26) methyl tert butyl ether	7.13	73	97424	10.34 ug/L 99
27) trans-1,2-dichloroethene	7.15	61	48366	10.91 ug/L 97
28) hexane	7.45	56	23596	11.92 ug/L 93
29) di-isopropyl ether	7.64	45	113510	10.43 ug/L 97
30) 2-butanone	8.23	72	9402	43.61 ug/L # 89
31) 1,1-dichloroethane	7.66	63	56874	10.72 ug/L 97
32) chloroprene	7.75	53	39284	10.65 ug/L 97
33) acrylonitrile	7.06	53	10604	10.63 ug/L 94
34) vinyl acetate	7.59	86	3385	10.04 ug/L 97
35) ethyl tert-butyl ether	8.05	59	103239	10.27 ug/L 99
36) ethyl acetate	8.23	45	3056	9.78 ug/L # 57

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.34	77	56014	10.65	ug/L	97
38) cis-1,2-dichloroethene	8.30	96	32958	10.50	ug/L	100
39) propionitrile	8.30	54	39394	105.25	ug/L	86
40) methyl acrylate	8.32	85	2769	9.52	ug/L	# 64
41) methacrylonitrile	8.48	67	8456	10.27	ug/L	94
42) bromochloromethane	8.57	128	15612	10.47	ug/L	98
43) tetrahydrofuran	8.58	72	2893	9.99	ug/L	# 85
44) chloroform	8.64	83	49444	10.22	ug/L	99
45) tert-butyl formate	8.68	59	29357	10.27	ug/L	98
47) 1,1,1-trichloroethane	8.90	97	54744	10.47	ug/L	92
48) cyclohexane	9.00	84	55205	10.04	ug/L	97
50) 1,1-dichloropropene	9.04	75	34346	10.93	ug/L	96
51) carbon tetrachloride	9.08	117	48493	10.97	ug/L	98
52) tert-amyl alcohol	9.14	73	8167	53.76	ug/L	# 67
53) isopropyl acetate	9.16	87	4553	10.28	ug/L	# 82
56) n-butyl alcohol	9.67	56	45936	578.63	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	134836	11.44	ug/L	99
58) benzene	9.27	78	104789	10.35	ug/L	99
59) tert-amyl methyl ether	9.33	73	91661	10.16	ug/L	98
60) heptane	9.49	57	23098	11.55	ug/L	94
61) 1,2-dichloroethane	9.29	62	30969	10.40	ug/L	97
62) ethyl acrylate	9.91	55	24687	10.49	ug/L	99
63) trichloroethene	9.94	95	25176	10.41	ug/L	96
64) 2-chloroethyl vinyl ether	10.70	63	72221	54.00	ug/L	99
65) methyl methacrylate	10.17	100	4753	8.95	ug/L	85
66) methylcyclohexane	10.24	83	67009	11.31	ug/L	96
67) 1,2-dichloropropane	10.22	63	28088	10.50	ug/L	98
68) dibromomethane	10.33	93	15300	10.32	ug/L	91
69) bromodichloromethane	10.47	83	34385	10.37	ug/L	98
70) 2-nitropropane	10.67	41	7733	10.43	ug/L	87
71) epichlorohydrin	10.79	57	11188	51.23	ug/L	96
72) cis-1,3-dichloropropene	10.92	75	38614	10.15	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	39426	42.74	ug/L	95
74) isoamyl alcohol	11.01	70	17136	226.83	ug/L	97
77) toluene	11.31	92	61372	10.09	ug/L	96
78) ethyl methacrylate	11.48	69	27028	10.00	ug/L	98
79) trans-1,3-dichloropropene	11.50	75	33134	10.33	ug/L	90
80) 1,1,2-trichloroethane	11.73	83	18643	10.28	ug/L	99
81) tetrachloroethene	11.89	164	24191	10.53	ug/L	95
82) 2-hexanone	11.90	58	33608	43.47	ug/L	95
83) 1,3-dichloropropane	11.92	76	34445	10.25	ug/L	96
84) butyl acetate	11.97	56	15047	10.45	ug/L	91
85) dibromochloromethane	12.19	129	24977	9.81	ug/L	95
86) 1,2-dibromoethane	12.36	107	23767	9.80	ug/L	96
87) n-butyl ether	12.81	57	121018	10.51	ug/L	99
88) chlorobenzene	12.86	112	71145	10.29	ug/L	96
89) 1,1,1,2-tetrachloroethane	12.94	131	31100	10.25	ug/L	98
90) ethylbenzene	12.93	91	125191	10.56	ug/L	96
91) m,p-xylene	13.06	106	96632	20.87	ug/L	99
92) o-xylene	13.50	91	107748	10.40	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81327.D
 Acq On : 25 Apr 2018 6:46 pm
 Operator : HueanhT
 Sample : IC3370-10
 Misc : MS25764,V4B3370,,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:00 2018
 Response via : Initial Calibration

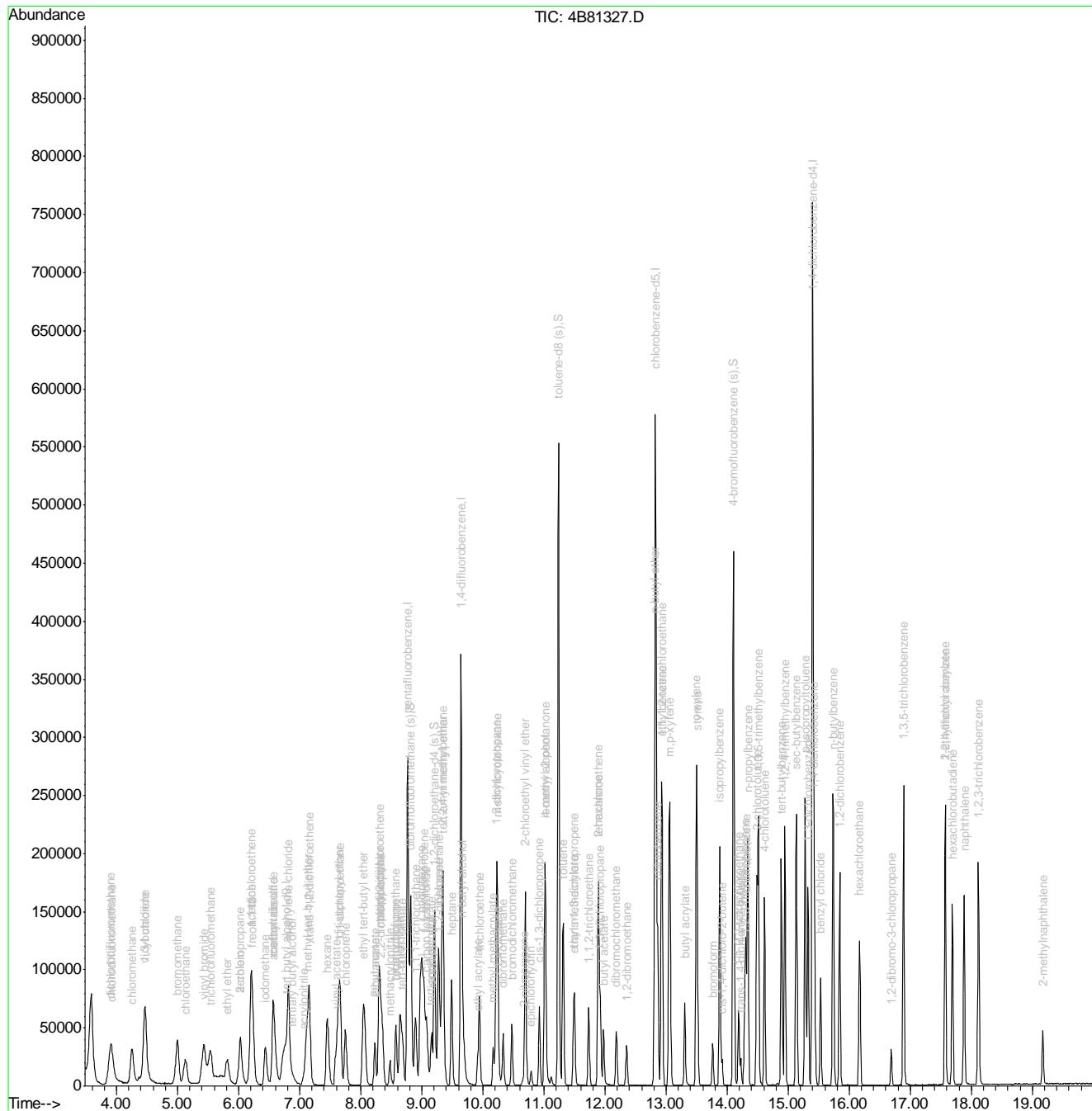
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	78228	10.57	ug/L	98
94) butyl acrylate	13.31	55	46853	10.29	ug/L	98
95) isopropylbenzene	13.88	105	141431	10.45	ug/L	99
96) bromoform	13.76	173	17392	9.69	ug/L	97
97) cis-1,4-dichloro-2-butene	13.92	88	5069	10.13	ug/L	92
100) 1,1,2,2-tetrachloroethane	14.19	83	34421	10.01	ug/L	99
101) trans-1,4-dichloro-2-butene	14.22	53	4613	8.97	ug/L	89
102) 1,2,3-trichloropropane	14.29	110	8760	10.30	ug/L	93
103) bromobenzene	14.31	156	37892	10.51	ug/L	96
104) n-propylbenzene	14.34	91	166674	10.73	ug/L	99
105) 2-chlorotoluene	14.48	126	35010	10.28	ug/L	98
106) 4-chlorotoluene	14.61	91	93135	10.32	ug/L	100
108) 1,3,5-trimethylbenzene	14.51	105	122665	10.54	ug/L	99
109) tert-butylbenzene	14.89	119	100002	9.83	ug/L	97
110) 1,2,4-trimethylbenzene	14.94	105	126530	10.78	ug/L	98
111) sec-butylbenzene	15.13	105	168404	10.55	ug/L	99
112) p-isopropyltoluene	15.28	119	146038	10.72	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	76409	10.50	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	74979	10.23	ug/L	100
115) 1,2-dichlorobenzene	15.84	146	80962	10.34	ug/L	99
116) benzyl chloride	15.53	91	67833	10.04	ug/L	98
118) n-butylbenzene	15.73	92	78263	11.09	ug/L	95
120) hexachloroethane	16.17	201	24162	9.31	ug/L	95
121) 1,2-dibromo-3-chloropropan	16.69	157	9549	9.77	ug/L	96
122) 1,3,5-trichlorobenzene	16.89	180	87005	10.35	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	75468	10.35	ug/L	99
124) 2-ethylhexyl acrylate	17.58	70	5168	1.79	ug/L	87
125) hexachlorobutadiene	17.69	225	37295	10.62	ug/L	98
126) naphthalene	17.88	128	136806	9.48	ug/L	99
127) 1,2,3-trichlorobenzene	18.11	180	67483	10.21	ug/L	98
128) 2-methylnaphthalene	19.17	142	26621	3.58	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81327.D
Acq On : 25 Apr 2018 6:46 pm
Operator : HueanhT
Sample : IC3370-10
Misc : MS25764,V4B3370,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 26 08:30:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:30:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.79	65	140015	500.00	ug/L	0.01
5) pentafluorobenzene	8.77	168	249940	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	321938	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	317148	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	207057	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111798	49.89	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.78%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	105141	50.27	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 100.54%	
76) toluene-d8 (s)	11.24	98	380362	49.51	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.02%	
99) 4-bromofluorobenzene (s)	14.10	95	151529	50.41	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.82%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.87	59	36709	100.17 ug/L 97
4) 1,4-dioxane	10.26	88	16780	498.35 ug/L 95
6) chlorodifluoromethane	3.91	51	128915	20.67 ug/L 100
7) dichlorodifluoromethane	3.90	85	123920	19.25 ug/L 95
8) chloromethane	4.25	50	140151	17.93 ug/L 98
9) vinyl chloride	4.47	62	140659	19.16 ug/L 99
10) 1,3-butadiene	4.47	54	90277	21.59 ug/L 100
11) bromomethane	5.00	94	99414	18.83 ug/L 98
12) chloroethane	5.13	64	73848	18.60 ug/L 97
13) trichlorofluoromethane	5.54	101	132225	19.02 ug/L 99
14) vinyl bromide	5.43	106	88655	18.75 ug/L 99
15) ethyl ether	5.82	74	30547	21.08 ug/L 92
16) 2-chloropropane	6.03	43	112394	19.73 ug/L 98
17) acrolein	6.03	56	12567	20.21 ug/L 97
18) freon 113	6.24	151	66145	21.02 ug/L 94
19) 1,1-dichloroethene	6.20	61	108373	20.85 ug/L 98
20) acetone	6.20	58	19035	81.57 ug/L # 80
21) acetonitrile	6.58	41	94753	199.43 ug/L 98
22) iodomethane	6.44	142	118099	20.17 ug/L 99
23) carbon disulfide	6.58	76	225997	20.23 ug/L 99
24) methylene chloride	6.82	84	76746	20.18 ug/L 97
25) methyl acetate	6.57	43	41919	21.32 ug/L 98
26) methyl tert butyl ether	7.13	73	196213	20.21 ug/L 99
27) trans-1,2-dichloroethene	7.16	61	92607	20.26 ug/L 99
28) hexane	7.45	56	40696	19.94 ug/L 87
29) di-isopropyl ether	7.64	45	231340	20.63 ug/L 97
30) 2-butanone	8.22	72	18728	84.29 ug/L 98
31) 1,1-dichloroethane	7.67	63	110954	20.30 ug/L 98
32) chloroprene	7.75	53	78045	20.52 ug/L 99
33) acrylonitrile	7.07	53	20868	20.29 ug/L 91
34) vinyl acetate	7.59	86	6853	19.72 ug/L # 93
35) ethyl tert-butyl ether	8.05	59	210539	20.33 ug/L 98
36) ethyl acetate	8.23	45	6204	19.26 ug/L # 71

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	107667	19.86	ug/L	99
38) cis-1,2-dichloroethene	8.30	96	65572	20.26	ug/L	96
39) propionitrile	8.30	54	80546	208.80	ug/L	85
40) methyl acrylate	8.31	85	6215	20.74	ug/L	99
41) methacrylonitrile	8.48	67	17476	20.59	ug/L	96
42) bromochloromethane	8.57	128	32110	20.90	ug/L	97
43) tetrahydrofuran	8.58	72	6286	21.06	ug/L	91
44) chloroform	8.65	83	99263	19.92	ug/L	97
45) tert-butyl formate	8.68	59	61295	20.80	ug/L	95
47) 1,1,1-trichloroethane	8.90	97	108886	20.21	ug/L	97
48) cyclohexane	9.00	84	107451	18.96	ug/L	94
50) 1,1-dichloropropene	9.04	75	65602	20.25	ug/L	99
51) carbon tetrachloride	9.08	117	92671	20.34	ug/L	97
52) tert-amyl alcohol	9.15	73	14710	93.95	ug/L	89
53) isopropyl acetate	9.17	87	9044	19.81	ug/L	94
56) n-butyl alcohol	9.67	56	85459	1055.10	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	233170	19.39	ug/L	97
58) benzene	9.27	78	208220	20.16	ug/L	99
59) tert-amyl methyl ether	9.34	73	191091	20.76	ug/L	98
60) heptane	9.49	57	39920	19.57	ug/L	97
61) 1,2-dichloroethane	9.29	62	61657	20.30	ug/L	99
62) ethyl acrylate	9.91	55	50742	21.14	ug/L	99
63) trichloroethene	9.94	95	50469	20.44	ug/L	98
64) 2-chloroethyl vinyl ether	10.70	63	146442	107.32	ug/L	98
65) methyl methacrylate	10.17	100	11143	20.56	ug/L	96
66) methylcyclohexane	10.24	83	123922	20.49	ug/L	99
67) 1,2-dichloropropane	10.22	63	55744	20.42	ug/L	99
68) dibromomethane	10.33	93	31637	20.91	ug/L	98
69) bromodichloromethane	10.47	83	69196	20.45	ug/L	99
70) 2-nitropropane	10.67	41	15527	20.52	ug/L	88
71) epichlorohydrin	10.79	57	22708	101.91	ug/L	99
72) cis-1,3-dichloropropene	10.92	75	79385	20.45	ug/L	99
73) 4-methyl-2-pentanone	11.02	58	79563	84.53	ug/L	92
74) isoamyl alcohol	11.01	70	33254	431.44	ug/L	94
77) toluene	11.31	92	124074	20.02	ug/L	97
78) ethyl methacrylate	11.48	69	57438	20.85	ug/L	97
79) trans-1,3-dichloropropene	11.50	75	67074	20.53	ug/L	96
80) 1,1,2-trichloroethane	11.73	83	38150	20.66	ug/L	94
81) tetrachloroethene	11.89	164	47486	20.29	ug/L	97
82) 2-hexanone	11.90	58	68092	86.47	ug/L	99
83) 1,3-dichloropropane	11.92	76	69461	20.29	ug/L	98
84) butyl acetate	11.97	56	30449	20.76	ug/L	93
85) dibromochloromethane	12.19	129	53522	20.63	ug/L	98
86) 1,2-dibromoethane	12.36	107	49119	19.88	ug/L	100
87) n-butyl ether	12.81	57	247596	21.11	ug/L	98
88) chlorobenzene	12.86	112	140110	19.89	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	63184	20.45	ug/L	99
90) ethylbenzene	12.93	91	248617	20.58	ug/L	98
91) m,p-xylene	13.06	106	191494	40.59	ug/L	97
92) o-xylene	13.50	91	219674	20.82	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81328.D
 Acq On : 25 Apr 2018 7:14 pm
 Operator : HueanhT
 Sample : IC3370-20
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:33 2018
 Response via : Initial Calibration

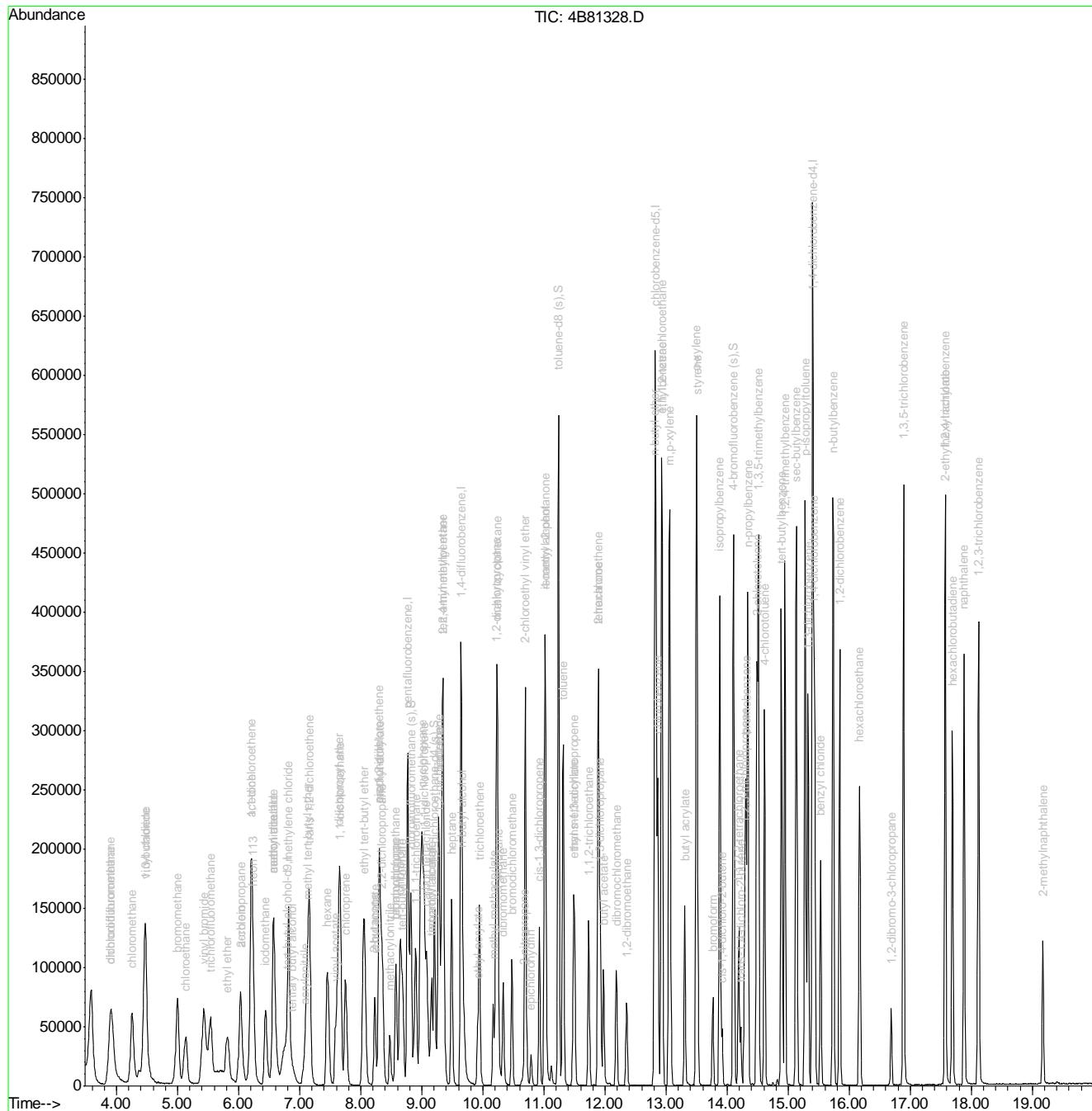
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	161546	21.44	ug/L	99
94) butyl acrylate	13.31	55	98627	21.27	ug/L	99
95) isopropylbenzene	13.88	105	287582	20.87	ug/L	99
96) bromoform	13.77	173	36655	20.05	ug/L	98
97) cis-1,4-dichloro-2-butene	13.92	88	10096	16.25	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	69765	20.39	ug/L	97
101) trans-1,4-dichloro-2-butene	14.22	53	9192	17.96	ug/L	96
102) 1,2,3-trichloropropane	14.29	110	17540	20.72	ug/L	98
103) bromobenzene	14.31	156	73606	20.51	ug/L	98
104) n-propylbenzene	14.34	91	325621	21.06	ug/L	99
105) 2-chlorotoluene	14.48	126	69741	20.58	ug/L	98
106) 4-chlorotoluene	14.61	91	184781	20.57	ug/L	99
108) 1,3,5-trimethylbenzene	14.51	105	247404	21.36	ug/L	100
109) tert-butylbenzene	14.89	119	207752	20.52	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	253269	21.67	ug/L	99
111) sec-butylbenzene	15.13	105	341981	21.53	ug/L	100
112) p-isopropyltoluene	15.28	119	291545	21.50	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	147201	20.32	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	145732	19.97	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	160455	20.58	ug/L	99
116) benzyl chloride	15.53	91	136995	20.38	ug/L	97
118) n-butylbenzene	15.73	92	154696	22.02	ug/L	96
120) hexachloroethane	16.17	201	49611	19.20	ug/L	95
121) 1,2-dibromo-3-chloropropan	16.69	157	19386	19.94	ug/L	92
122) 1,3,5-trichlorobenzene	16.89	180	175410	20.96	ug/L	100
123) 1,2,4-trichlorobenzene	17.57	180	156674	21.58	ug/L	100
124) 2-ethylhexyl acrylate	17.58	70	13017	3.47	ug/L	96
125) hexachlorobutadiene	17.69	225	72449	20.73	ug/L	98
126) naphthalene	17.88	128	295634	20.59	ug/L	100
127) 1,2,3-trichlorobenzene	18.12	180	142724	21.69	ug/L	98
128) 2-methylnaphthalene	19.17	142	65217	8.80	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81328.D
Acq On : 25 Apr 2018 7:14 pm
Operator : HueanhT
Sample : IC3370-20
Misc : MS25764,V4B3370,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 26 08:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:30:33 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	136240	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	247560	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	319483	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	313720	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	199074	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111611	50.28	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.56%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	102174	49.23	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 98.46%	
76) toluene-d8 (s)	11.24	98	383203	50.42	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.84%	
99) 4-bromofluorobenzene (s)	14.10	95	150901	52.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 104.42%	

Target Compounds

				QValue
3) tertiary butyl alcohol	6.89	59	89992	252.38 ug/L 100
4) 1,4-dioxane	10.26	88	43680	1333.21 ug/L 100
6) chlorodifluoromethane	3.91	51	322133	52.15 ug/L 100
7) dichlorodifluoromethane	3.90	85	334665	52.48 ug/L 100
8) chloromethane	4.25	50	363404	46.93 ug/L 100
9) vinyl chloride	4.47	62	342063	47.04 ug/L 100
10) 1,3-butadiene	4.47	54	217540	52.53 ug/L 100
11) bromomethane	5.00	94	236697	45.27 ug/L 100
12) chloroethane	5.13	64	177353	45.11 ug/L 100
13) trichlorofluoromethane	5.54	101	330500	48.01 ug/L 100
14) vinyl bromide	5.42	106	222334	47.47 ug/L 100
15) ethyl ether	5.82	74	76718	53.46 ug/L 100
16) 2-chloropropane	6.03	43	277287	49.16 ug/L 100
17) acrolein	6.03	56	31963	51.89 ug/L 100
18) freon 113	6.23	151	170753	54.78 ug/L 100
19) 1,1-dichloroethene	6.20	61	263117	51.11 ug/L 100
20) acetone	6.20	58	47953	207.48 ug/L 100
21) acetonitrile	6.58	41	242215	513.10 ug/L 100
22) iodomethane	6.44	142	299300	51.60 ug/L 100
23) carbon disulfide	6.57	76	570065	51.51 ug/L 100
24) methylene chloride	6.82	84	191115	50.74 ug/L 100
25) methyl acetate	6.57	43	98307	50.48 ug/L 100
26) methyl tert butyl ether	7.13	73	494004	51.36 ug/L 100
27) trans-1,2-dichloroethene	7.16	61	229949	50.80 ug/L 100
28) hexane	7.45	56	113766	56.28 ug/L 100
29) di-isopropyl ether	7.64	45	579557	52.17 ug/L 100
30) 2-butanone	8.22	72	47714	216.82 ug/L 100
31) 1,1-dichloroethane	7.67	63	272514	50.33 ug/L 100
32) chloroprene	7.75	53	198958	52.82 ug/L 100
33) acrylonitrile	7.07	53	54790	53.78 ug/L 100
34) vinyl acetate	7.58	86	18240	52.98 ug/L 100
35) ethyl tert-butyl ether	8.05	59	543756	53.00 ug/L 100
36) ethyl acetate	8.23	45	16966	53.17 ug/L 100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	268714	50.06	ug/L	100
38) cis-1,2-dichloroethene	8.30	96	164154	51.21	ug/L	100
39) propionitrile	8.30	54	197522	516.97	ug/L	100
40) methyl acrylate	8.31	85	15480	52.14	ug/L	100
41) methacrylonitrile	8.48	67	44613	53.08	ug/L	100
42) bromochloromethane	8.57	128	80824	53.12	ug/L	100
43) tetrahydrofuran	8.58	72	15675	53.03	ug/L	100
44) chloroform	8.65	83	249802	50.60	ug/L	100
45) tert-butyl formate	8.68	59	159975	54.81	ug/L	100
47) 1,1,1-trichloroethane	8.90	97	279414	52.35	ug/L	100
48) cyclohexane	9.01	84	273593	48.74	ug/L	100
50) 1,1-dichloropropene	9.04	75	162487	50.64	ug/L	100
51) carbon tetrachloride	9.08	117	234965	52.06	ug/L	100
52) tert-amyl alcohol	9.15	73	38181	246.21	ug/L	100
53) isopropyl acetate	9.16	87	22925	50.70	ug/L	100
56) n-butyl alcohol	9.67	56	200809	2498.29	ug/L	100
57) 2,2,4-trimethylpentane	9.35	57	682941	57.22	ug/L	100
58) benzene	9.27	78	519539	50.69	ug/L	100
59) tert-amyl methyl ether	9.34	73	475847	52.09	ug/L	100
60) heptane	9.49	57	113009	55.82	ug/L	100
61) 1,2-dichloroethane	9.29	62	146532	48.62	ug/L	100
62) ethyl acrylate	9.91	55	128609	53.99	ug/L	100
63) trichloroethene	9.94	95	126241	51.53	ug/L	100
64) 2-chloroethyl vinyl ether	10.70	63	365287	269.77	ug/L	100
65) methyl methacrylate	10.17	100	28860	53.65	ug/L	100
66) methylcyclohexane	10.24	83	333159	55.52	ug/L	100
67) 1,2-dichloropropane	10.23	63	136032	50.22	ug/L	100
68) dibromomethane	10.33	93	78195	52.09	ug/L	100
69) bromodichloromethane	10.48	83	175899	52.38	ug/L	100
70) 2-nitropropane	10.67	41	39003	51.95	ug/L	100
71) epichlorohydrin	10.79	57	58199	263.19	ug/L	100
72) cis-1,3-dichloropropene	10.92	75	204501	53.08	ug/L	100
73) 4-methyl-2-pentanone	11.02	58	196203	210.06	ug/L	100
74) isoamyl alcohol	11.01	70	79398	1038.03	ug/L	100
77) toluene	11.31	92	315629	51.50	ug/L	100
78) ethyl methacrylate	11.48	69	149880	55.01	ug/L	100
79) trans-1,3-dichloropropene	11.50	75	172592	53.41	ug/L	100
80) 1,1,2-trichloroethane	11.73	83	95066	52.05	ug/L	100
81) tetrachloroethene	11.89	164	120491	52.04	ug/L	100
82) 2-hexanone	11.90	58	163739	210.20	ug/L	100
83) 1,3-dichloropropane	11.93	76	170308	50.29	ug/L	100
84) butyl acetate	11.97	56	74497	51.33	ug/L	100
85) dibromochloromethane	12.19	129	139016	54.17	ug/L	100
86) 1,2-dibromoethane	12.36	107	126091	51.60	ug/L	100
87) n-butyl ether	12.81	57	631671	54.44	ug/L	100
88) chlorobenzene	12.86	112	355191	50.96	ug/L	100
89) 1,1,1,2-tetrachloroethane	12.94	131	160480	52.52	ug/L	100
90) ethylbenzene	12.93	91	613330	51.32	ug/L	100
91) m,p-xylene	13.06	106	482251	103.35	ug/L	100
92) o-xylene	13.50	91	548660	52.57	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81329.D
 Acq On : 25 Apr 2018 7:42 pm
 Operator : HueanhT
 Sample : ICC3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:30:53 2018
 Response via : Initial Calibration

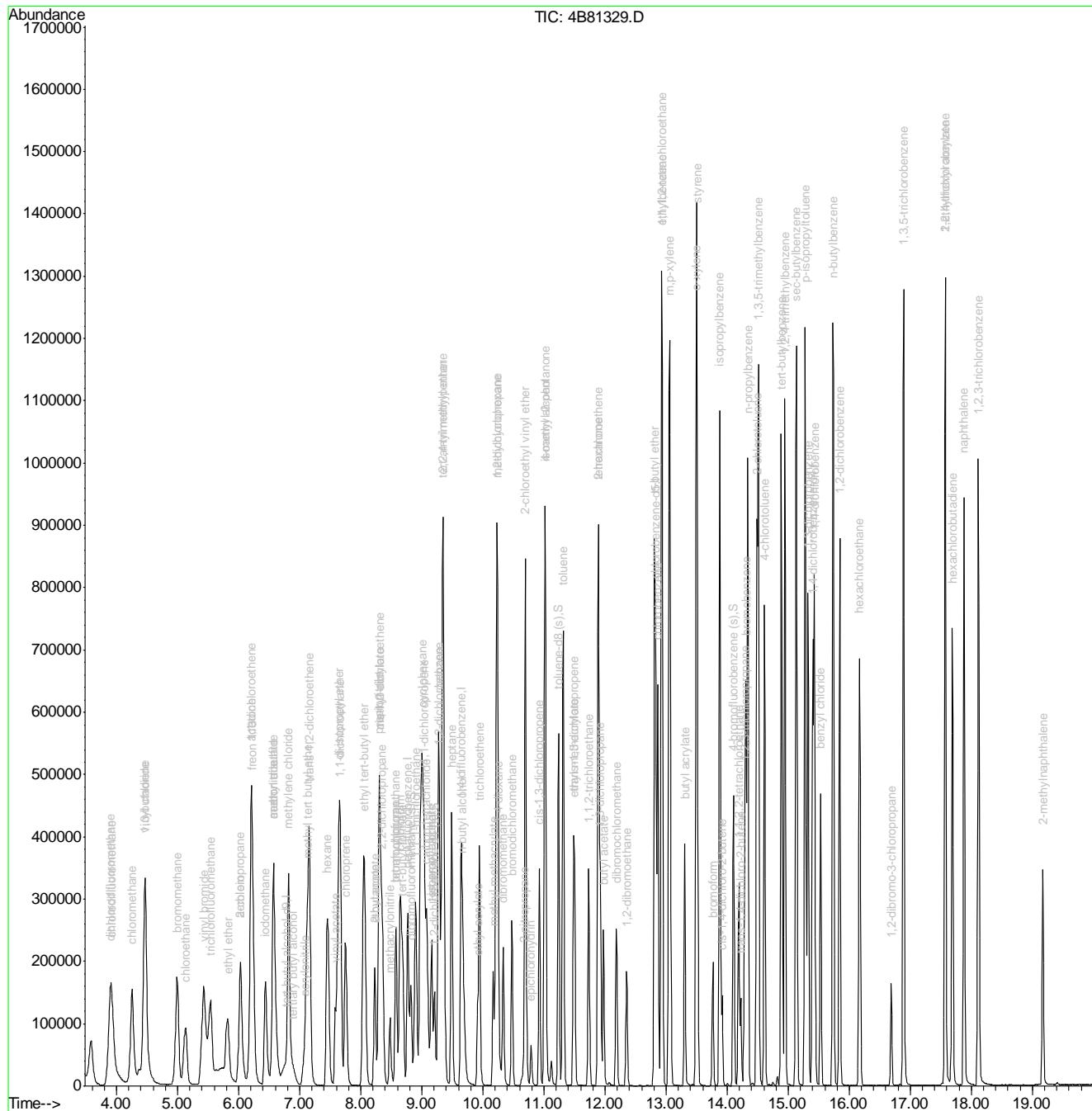
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	400979	53.79	ug/L	100
94) butyl acrylate	13.31	55	247291	53.92	ug/L	100
95) isopropylbenzene	13.88	105	746541	54.76	ug/L	100
96) bromoform	13.77	173	98773	54.61	ug/L	100
97) cis-1,4-dichloro-2-butene	13.92	88	32690	44.73	ug/L	100
100) 1,1,2,2-tetrachloroethane	14.19	83	176131	53.54	ug/L	100
101) trans-1,4-dichloro-2-butene	14.22	53	26920	54.71	ug/L	100
102) 1,2,3-trichloropropane	14.29	110	42270	51.94	ug/L	100
103) bromobenzene	14.31	156	182814	52.99	ug/L	100
104) n-propylbenzene	14.34	91	803501	54.06	ug/L	100
105) 2-chlorotoluene	14.49	126	175862	53.98	ug/L	100
106) 4-chlorotoluene	14.61	91	456646	52.87	ug/L	100
108) 1,3,5-trimethylbenzene	14.51	105	615071	55.23	ug/L	100
109) tert-butylbenzene	14.89	119	550547	56.57	ug/L	100
110) 1,2,4-trimethylbenzene	14.94	105	628963	55.98	ug/L	100
111) sec-butylbenzene	15.13	105	876976	57.42	ug/L	100
112) p-isopropyltoluene	15.28	119	747802	57.36	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	357535	51.32	ug/L	100
114) 1,4-dichlorobenzene	15.43	146	352006	50.18	ug/L	100
115) 1,2-dichlorobenzene	15.84	146	388855	51.87	ug/L	100
116) benzyl chloride	15.53	91	344748	53.33	ug/L	100
118) n-butylbenzene	15.73	92	383240	56.74	ug/L	100
120) hexachloroethane	16.17	201	138778	55.85	ug/L	100
121) 1,2-dibromo-3-chloropropan	16.69	157	50663	54.19	ug/L	100
122) 1,3,5-trichlorobenzene	16.89	180	439101	54.59	ug/L	100
123) 1,2,4-trichlorobenzene	17.57	180	402226	57.62	ug/L	100
124) 2-ethylhexyl acrylate	17.58	70	41534	9.90	ug/L	100
125) hexachlorobutadiene	17.69	225	182579	54.34	ug/L	100
126) naphthalene	17.88	128	769597	55.74	ug/L	100
127) 1,2,3-trichlorobenzene	18.12	180	372591	58.89	ug/L	100
128) 2-methylnaphthalene	19.17	142	196782	27.63	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370
Data File : 4B81329.D
Acq On : 25 Apr 2018 7:42 pm
Operator : HueanhT
Sample : ICC3370-50
Misc : MS25764,V4B3370,,5,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 26 08:31:05 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:30:53 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.79	65	140967	500.00	ug/L	0.02
5) pentafluorobenzene	8.77	168	249399	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	321840	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	307738	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	197537	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	110860	49.58	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.16%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	99450	47.56	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 95.12%	
76) toluene-d8 (s)	11.24	98	381587	51.18	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 102.36%	
99) 4-bromofluorobenzene (s)	14.10	95	148094	51.64	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 103.28%	

Target Compounds

				QValue	
3) tertiary butyl alcohol	6.89	59	188860	511.89	ug/L 100
4) 1,4-dioxane	10.26	88	88954	2624.03	ug/L 95
6) chlorodifluoromethane	3.91	51	609244	97.90	ug/L 99
7) dichlorodifluoromethane	3.90	85	649126	101.03	ug/L 98
8) chloromethane	4.25	50	694531	89.04	ug/L 99
9) vinyl chloride	4.46	62	659571	90.03	ug/L 99
10) 1,3-butadiene	4.47	54	406386	97.40	ug/L 99
11) bromomethane	4.99	94	431697	81.95	ug/L 99
12) chloroethane	5.12	64	326975	82.56	ug/L 99
13) trichlorofluoromethane	5.54	101	640110	92.30	ug/L 97
14) vinyl bromide	5.42	106	429348	90.99	ug/L 96
15) ethyl ether	5.82	74	147800	102.22	ug/L 97
16) 2-chloropropane	6.03	43	517084	90.99	ug/L 98
17) acrolein	6.03	56	61953	99.83	ug/L 100
18) freon 113	6.23	151	330775	105.33	ug/L 96
19) 1,1-dichloroethene	6.20	61	479408	92.43	ug/L 98
20) acetone	6.19	58	92722	398.22	ug/L 94
21) acetonitrile	6.57	41	465525	977.69	ug/L 100
22) iodomethane	6.43	142	571275	97.77	ug/L 98
23) carbon disulfide	6.57	76	1063703	95.41	ug/L 100
24) methylene chloride	6.82	84	354663	93.47	ug/L 99
25) methyl acetate	6.58	43	185344	94.47	ug/L 99
26) methyl tert butyl ether	7.13	73	952488	98.30	ug/L 100
27) trans-1,2-dichloroethene	7.16	61	413942	90.77	ug/L 95
28) hexane	7.45	56	213804	105.00	ug/L 98
29) di-isopropyl ether	7.64	45	1078433	96.37	ug/L 100
30) 2-butanone	8.22	72	96011	433.07	ug/L 99
31) 1,1-dichloroethane	7.67	63	498027	91.30	ug/L 100
32) chloroprene	7.75	53	375997	99.09	ug/L 99
33) acrylonitrile	7.07	53	107560	104.81	ug/L 97
34) vinyl acetate	7.58	86	36168	104.28	ug/L 97
35) ethyl tert-butyl ether	8.06	59	1044218	101.03	ug/L 99
36) ethyl acetate	8.23	45	33586	104.47	ug/L # 88

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
37) 2,2-dichloropropane	8.35	77	508502	94.02	ug/L	97
38) cis-1,2-dichloroethene	8.30	96	309784	95.93	ug/L	97
39) propionitrile	8.30	54	383347	995.93	ug/L	94
40) methyl acrylate	8.31	85	31470	105.22	ug/L	96
41) methacrylonitrile	8.47	67	88843	104.92	ug/L	99
42) bromochloromethane	8.57	128	155182	101.23	ug/L	99
43) tetrahydrofuran	8.58	72	32227	108.22	ug/L	96
44) chloroform	8.64	83	471381	94.78	ug/L	99
45) tert-butyl formate	8.68	59	317760	108.07	ug/L	96
47) 1,1,1-trichloroethane	8.90	97	539496	100.33	ug/L	99
48) cyclohexane	9.01	84	539058	95.32	ug/L	99
50) 1,1-dichloropropene	9.04	75	302464	93.57	ug/L	98
51) carbon tetrachloride	9.08	117	453028	99.64	ug/L	99
52) tert-amyl alcohol	9.14	73	81343	520.67	ug/L #	89
53) isopropyl acetate	9.16	87	47020	103.22	ug/L	97
56) n-butyl alcohol	9.67	56	400287	4943.55	ug/L	99
57) 2,2,4-trimethylpentane	9.35	57	1294389	107.65	ug/L	99
58) benzene	9.27	78	992724	96.16	ug/L	99
59) tert-amyl methyl ether	9.34	73	927884	100.84	ug/L	97
60) heptane	9.49	57	214767	105.30	ug/L	94
61) 1,2-dichloroethane	9.29	62	275583	90.77	ug/L	99
62) ethyl acrylate	9.91	55	265649	110.70	ug/L	99
63) trichloroethene	9.94	95	242291	98.18	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	709688	520.27	ug/L	98
65) methyl methacrylate	10.17	100	59642	110.05	ug/L	96
66) methylcyclohexane	10.24	83	638922	105.70	ug/L	99
67) 1,2-dichloropropane	10.22	63	254473	93.27	ug/L	99
68) dibromomethane	10.33	93	151453	100.15	ug/L	94
69) bromodichloromethane	10.47	83	344142	101.73	ug/L	97
70) 2-nitropropane	10.67	41	76308	100.90	ug/L	98
71) epichlorohydrin	10.79	57	119521	536.54	ug/L	97
72) cis-1,3-dichloropropene	10.92	75	397850	102.52	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	382805	406.83	ug/L	98
74) isoamyl alcohol	11.01	70	158488	2056.86	ug/L	98
77) toluene	11.31	92	605207	100.66	ug/L	99
78) ethyl methacrylate	11.48	69	297695	111.39	ug/L	100
79) trans-1,3-dichloropropene	11.50	75	332860	105.02	ug/L	96
80) 1,1,2-trichloroethane	11.73	83	186488	104.08	ug/L	96
81) tetrachloroethene	11.89	164	231716	102.02	ug/L	99
82) 2-hexanone	11.90	58	324940	425.26	ug/L	96
83) 1,3-dichloropropane	11.93	76	324320	97.63	ug/L	100
84) butyl acetate	11.97	56	147297	103.47	ug/L	98
85) dibromochloromethane	12.19	129	275470	109.44	ug/L	99
86) 1,2-dibromoethane	12.36	107	252661	105.41	ug/L	100
87) n-butyl ether	12.81	57	1191767	104.70	ug/L	99
88) chlorobenzene	12.86	112	679263	99.35	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.94	131	310885	103.71	ug/L	97
90) ethylbenzene	12.93	91	1143258	97.52	ug/L	99
91) m,p-xylene	13.06	106	916500	200.23	ug/L	97
92) o-xylene	13.50	91	1042334	101.82	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration

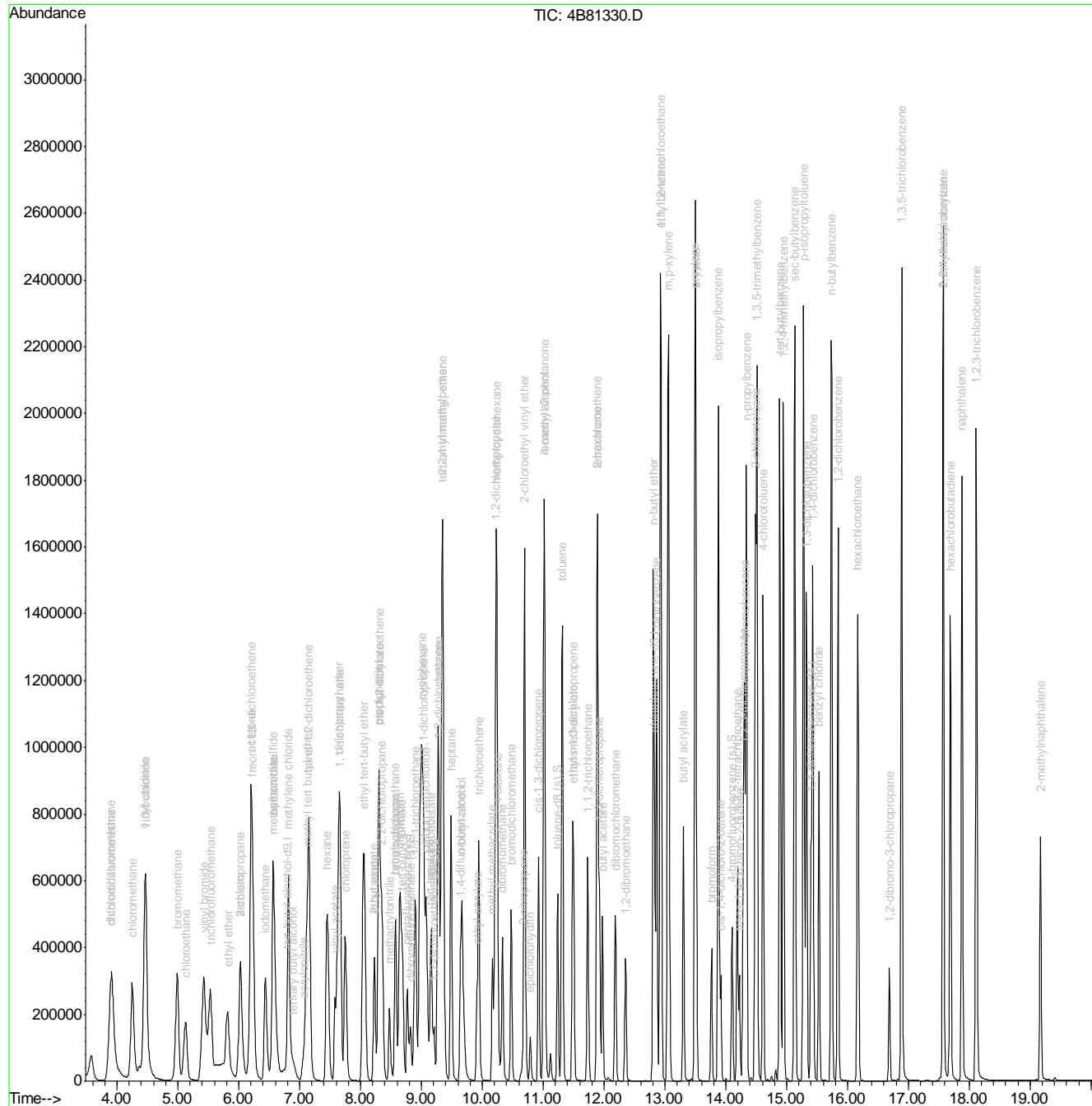
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
93) styrene	13.51	104	759754	103.91	ug/L	100
94) butyl acrylate	13.30	55	489536	108.82	ug/L	99
95) isopropylbenzene	13.88	105	1422956	106.40	ug/L	100
96) bromoform	13.77	173	201729	113.70	ug/L	99
97) cis-1,4-dichloro-2-butene	13.92	88	70687	94.12	ug/L	97
100) 1,1,2,2-tetrachloroethane	14.19	83	348183	106.66	ug/L	99
101) trans-1,4-dichloro-2-butene	14.22	53	57843	118.46	ug/L	87
102) 1,2,3-trichloropropane	14.29	110	84851	105.07	ug/L	99
103) bromobenzene	14.31	156	349967	102.22	ug/L	98
104) n-propylbenzene	14.34	91	1486837	100.81	ug/L	100
105) 2-chlorotoluene	14.49	126	335748	103.86	ug/L	99
106) 4-chlorotoluene	14.61	91	852201	99.43	ug/L	99
108) 1,3,5-trimethylbenzene	14.52	105	1168201	105.71	ug/L	98
109) tert-butylbenzene	14.89	119	1090653	112.94	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	1175480	105.44	ug/L	98
111) sec-butylbenzene	15.13	105	1706741	112.62	ug/L	99
112) p-isopropyltoluene	15.28	119	1433275	110.80	ug/L	99
113) 1,3-dichlorobenzene	15.33	146	670807	97.04	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	676607	97.20	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	740840	99.59	ug/L	100
116) benzyl chloride	15.53	91	680198	106.04	ug/L	98
118) n-butylbenzene	15.73	92	726903	108.46	ug/L	100
120) hexachloroethane	16.17	201	293664	119.11	ug/L	99
121) 1,2-dibromo-3-chloropropan	16.69	157	108276	116.72	ug/L	97
122) 1,3,5-trichlorobenzene	16.89	180	851100	106.62	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	788596	113.84	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	91850	21.21	ug/L	97
125) hexachlorobutadiene	17.69	225	352604	105.77	ug/L	99
126) naphthalene	17.88	128	1545539	112.81	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	730418	116.35	ug/L	99
128) 2-methylnaphthalene	19.17	142	421317	59.62	ug/L	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81330.D
 Acq On : 25 Apr 2018 8:10 pm
 Operator : HueanhT
 Sample : IC3370-100
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 26 08:33:21 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:18 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.80	65	135013	500.00	ug/L	0.03
5) pentafluorobenzene	8.77	168	264077	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	347565	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	309164	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	217537	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.83	113	117822	49.76	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.52%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	102824	45.54	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 91.08%	
76) toluene-d8 (s)	11.24	98	398524	53.21	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 106.42%	
99) 4-bromofluorobenzene (s)	14.10	95	156867	49.67	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.34%	

Target Compounds

				Qvalue
3) tertiary butyl alcohol	6.89	59	379028	1072.62 ug/L 99
4) 1,4-dioxane	10.26	88	180473	5558.49 ug/L 98
6) chlorodifluoromethane	3.91	51	1096197	166.36 ug/L 99
7) dichlorodifluoromethane	3.90	85	1042816	153.29 ug/L 96
8) chloromethane	4.25	50	1393889	168.76 ug/L 99
9) vinyl chloride	4.46	62	1269628	163.68 ug/L 100
10) 1,3-butadiene	4.47	54	733556	166.04 ug/L 99
13) trichlorofluoromethane	5.53	101	1159276	157.87 ug/L 99
14) vinyl bromide	5.42	106	858928	171.90 ug/L 97
15) ethyl ether	5.82	74	307155	200.63 ug/L 96
16) 2-chloropropane	6.02	43	969522	161.12 ug/L 98
17) acrolein	6.04	56	126648	192.74 ug/L 94
18) freon 113	6.23	151	543305	163.40 ug/L 98
19) 1,1-dichloroethene	6.20	61	908242	165.38 ug/L 97
20) acetone	6.20	58	186073	754.73 ug/L 99
21) acetonitrile	6.58	41	912870	1807.66 ug/L 99
22) iodomethane	6.43	142	1200511	194.04 ug/L 97
23) carbon disulfide	6.57	76	2101545	178.02 ug/L 100
24) methylene chloride	6.82	84	733616	182.59 ug/L 99
25) methyl acetate	6.59	43	376597	181.29 ug/L 98
26) methyl tert butyl ether	7.13	73	1908032	185.98 ug/L 99
27) trans-1,2-dichloroethene	7.16	61	801304	165.94 ug/L 93
28) hexane	7.45	56	343838	159.47 ug/L 97
29) di-isopropyl ether	7.64	45	2129246	179.69 ug/L 99
30) 2-butanone	8.22	72	208220	887.00 ug/L 92
31) 1,1-dichloroethane	7.67	63	1006372	174.23 ug/L 99
32) chloroprene	7.75	53	769529	191.53 ug/L 97
33) acrylonitrile	7.07	53	221757	204.07 ug/L 96
34) vinyl acetate	7.58	86	80229	218.46 ug/L # 90
35) ethyl tert-butyl ether	8.06	59	2126933	194.34 ug/L 98
36) ethyl acetate	8.23	45	70377	206.75 ug/L # 93
37) 2,2-dichloropropane	8.35	77	990127	172.90 ug/L 95
38) cis-1,2-dichloroethene	8.30	96	646614	189.10 ug/L 96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	8.30	54	773530	1897.92	ug/L	78
40) methyl acrylate	8.31	85	65303	206.21	ug/L	99
41) methacrylonitrile	8.48	67	193158	215.44	ug/L	97
42) bromochloromethane	8.57	128	335251	206.54	ug/L	97
43) tetrahydrofuran	8.59	72	66955	212.33	ug/L	99
44) chloroform	8.65	83	993340	188.63	ug/L	99
45) tert-butyl formate	8.68	59	661379	212.43	ug/L	96
47) 1,1,1-trichloroethane	8.90	97	1081481	189.95	ug/L	98
48) cyclohexane	9.01	84	959453	160.22	ug/L	98
50) 1,1-dichloropropene	9.04	75	629132	183.82	ug/L	99
51) carbon tetrachloride	9.08	117	877406	182.25	ug/L	98
52) tert-amyl alcohol	9.15	73	169009	1021.69	ug/L	95
53) isopropyl acetate	9.16	87	102431	212.35	ug/L	#
56) n-butyl alcohol	9.67	56	804743	9202.98	ug/L	99
57) 2,2,4-trimethylpentane	9.35	57	2147534	165.38	ug/L	99
58) benzene	9.27	78	2111509	189.38	ug/L	99
59) tert-amyl methyl ether	9.34	73	1894748	190.67	ug/L	95
60) heptane	9.49	57	357072	162.12	ug/L	95
61) 1,2-dichloroethane	9.30	62	565708	172.54	ug/L	98
62) ethyl acrylate	9.91	55	544054	209.93	ug/L	99
63) trichloroethene	9.94	95	512342	192.24	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	1407706	955.60	ug/L	98
65) methyl methacrylate	10.17	100	127326	217.56	ug/L	92
66) methylcyclohexane	10.24	83	1091848	167.26	ug/L	97
67) 1,2-dichloropropane	10.23	63	517730	175.71	ug/L	99
68) dibromomethane	10.33	93	319466	195.62	ug/L	95
69) bromodichloromethane	10.47	83	734395	201.01	ug/L	99
70) 2-nitropropane	10.67	41	153701	188.19	ug/L	99
71) epichlorohydrin	10.79	57	249110	1035.51	ug/L	98
72) cis-1,3-dichloropropene	10.92	75	829158	197.84	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	757825	745.78	ug/L	94
74) isoamyl alcohol	11.01	70	307448	3694.74	ug/L	95
77) toluene	11.31	92	1266446	209.67	ug/L	97
78) ethyl methacrylate	11.48	69	618441	230.33	ug/L	97
79) trans-1,3-dichloropropene	11.50	75	676009	212.30	ug/L	98
80) 1,1,2-trichloroethane	11.73	83	386271	214.59	ug/L	97
81) tetrachloroethene	11.89	164	469464	205.75	ug/L	98
82) 2-hexanone	11.90	58	621589	809.74	ug/L	94
83) 1,3-dichloropropane	11.93	76	653285	195.74	ug/L	100
84) butyl acetate	11.97	56	296773	207.52	ug/L	99
85) dibromochloromethane	12.19	129	591457	233.89	ug/L	98
86) 1,2-dibromoethane	12.36	107	534123	221.81	ug/L	99
87) n-butyl ether	12.81	57	2396017	209.53	ug/L	98
88) chlorobenzene	12.86	112	1404658	204.51	ug/L	98
89) 1,1,1,2-tetrachloroethane	12.94	131	651271	216.27	ug/L	100
90) ethylbenzene	12.93	91	2275443	193.21	ug/L	98
91) m,p-xylene	13.06	106	1882125	409.29	ug/L	94
92) o-xylene	13.50	91	2109396	205.11	ug/L	98
93) styrene	13.51	104	1547184	210.62	ug/L	99
94) butyl acrylate	13.30	55	1011722	223.86	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81331.D
 Acq On : 25 Apr 2018 8:38 pm
 Operator : HueanhT
 Sample : IC3370-200
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:31:41 2018
 Response via : Initial Calibration

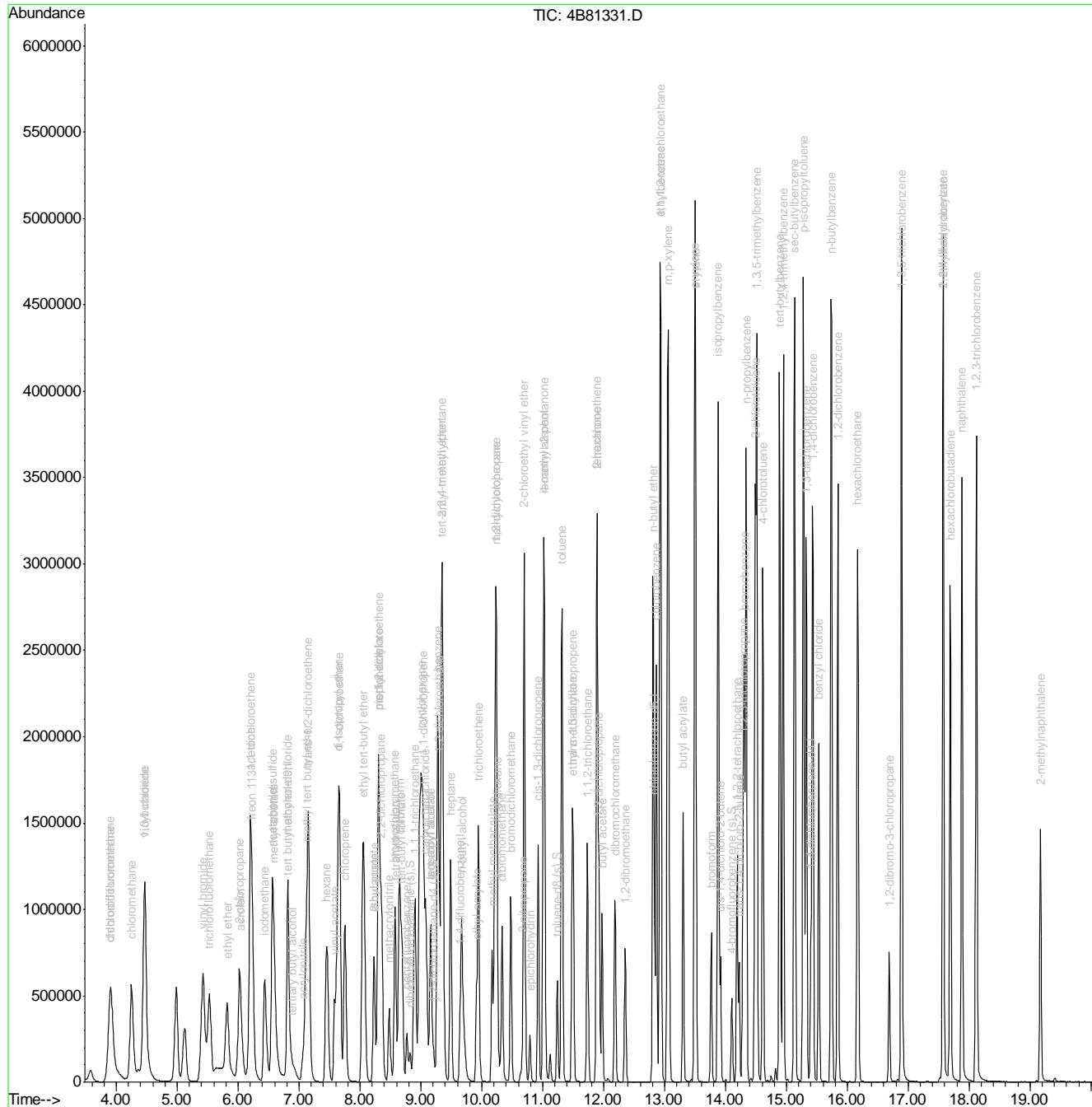
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
95) isopropylbenzene	13.88	105	2893339	215.35	ug/L	98
96) bromoform	13.77	173	437088	245.22	ug/L	99
97) cis-1,4-dichloro-2-butene	13.92	88	164741	213.41	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	721465	200.69	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	129875	241.53	ug/L	90
102) 1,2,3-trichloropropane	14.29	110	173718	195.33	ug/L	99
103) bromobenzene	14.31	156	732067	194.17	ug/L	97
104) n-propylbenzene	14.34	91	3009357	185.28	ug/L	99
105) 2-chlorotoluene	14.49	126	710104	199.46	ug/L	94
106) 4-chlorotoluene	14.61	91	1813569	192.15	ug/L	99
108) 1,3,5-trimethylbenzene	14.52	105	2413398	198.30	ug/L	96
109) tert-butylbenzene	14.89	119	2326074	218.73	ug/L	98
110) 1,2,4-trimethylbenzene	14.95	105	2466786	200.93	ug/L	96
111) sec-butylbenzene	15.13	105	3494713	209.39	ug/L	99
112) p-isopropyltoluene	15.28	119	2983002	209.41	ug/L	98
113) 1,3-dichlorobenzene	15.33	146	1448878	190.33	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	1489384	194.29	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	1590176	194.11	ug/L	99
116) benzyl chloride	15.53	91	1480955	209.66	ug/L	100
118) n-butylbenzene	15.73	92	1541934	208.92	ug/L	97
120) hexachloroethane	16.17	201	681621	251.05	ug/L	98
121) 1,2-dibromo-3-chloropropan	16.69	157	242585	237.45	ug/L	95
122) 1,3,5-trichlorobenzene	16.89	180	1792570	203.92	ug/L	98
123) 1,2,4-trichlorobenzene	17.57	180	1579773	207.08	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	191189	39.48	ug/L	95
125) hexachlorobutadiene	17.69	225	718904	195.81	ug/L	99
126) naphthalene	17.88	128	3056008	202.55	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	1426218	206.29	ug/L	96
128) 2-methylnaphthalene	19.17	142	861324	110.67	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
Data File : 4B81331.D
Acq On : 25 Apr 2018 8:38 pm
Operator : HueanhT
Sample : IC3370-200
Misc : MS25764,V4B3370,5,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 26 08:33:32 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:31:41 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	133751	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	255837	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.64	114	323523	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	314446	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	201286	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111415	48.57	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 97.14%	
55) 1,2-dichloroethane-d4 (s)	9.21	65	98486	46.86	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 93.72%	
76) toluene-d8 (s)	11.24	98	380483	49.95	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 99.90%	
99) 4-bromofluorobenzene (s)	14.10	95	148779	50.91	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 101.82%	

Target Compounds

				QValue
3) tertiary butyl alcohol	6.88	59	90728	259.18 ug/L 99
4) 1,4-dioxane	10.26	88	45220	1405.90 ug/L 90
7) dichlorodifluoromethane	3.90	85	319449	48.47 ug/L 98
8) chloromethane	4.25	50	375806	46.97 ug/L 99
9) vinyl chloride	4.46	62	334177	44.47 ug/L 99
10) 1,3-butadiene	4.47	54	240397	56.17 ug/L 100
11) bromomethane	4.99	94	246266	45.57 ug/L 98
12) chloroethane	5.13	64	203445	50.07 ug/L 99
13) trichlorofluoromethane	5.53	101	314837	44.25 ug/L 99
14) vinyl bromide	5.43	106	226907	46.87 ug/L 97
15) ethyl ether	5.82	74	71126	47.96 ug/L 95
16) 2-chloropropane	6.03	43	259951	44.59 ug/L 95
17) acrolein	6.03	56	32279	50.71 ug/L 92
18) freon 113	6.23	151	161598	50.17 ug/L 97
19) 1,1-dichloroethene	6.20	61	219819	41.31 ug/L 97
20) acetone	6.20	58	47453	198.67 ug/L 97
22) iodomethane	6.43	142	326664	54.50 ug/L 97
23) carbon disulfide	6.57	76	587685	51.39 ug/L 100
24) methylene chloride	6.82	84	180375	46.34 ug/L 97
25) methyl acetate	6.57	43	86973	43.22 ug/L 94
26) methyl tert butyl ether	7.12	73	930862	93.65 ug/L 98
27) trans-1,2-dichloroethene	7.16	61	206277	44.09 ug/L 94
28) hexane	7.45	56	96462	46.18 ug/L 97
29) di-isopropyl ether	7.64	45	553801	48.24 ug/L 97
30) 2-butanone	8.22	72	48900	215.02 ug/L 96
31) 1,1-dichloroethane	7.66	63	261626	46.75 ug/L 99
32) chloroprene	7.75	53	196080	50.38 ug/L 97
33) acrylonitrile	7.07	53	59951	56.95 ug/L 97
34) vinyl acetate	7.59	86	18849	52.98 ug/L # 81
35) ethyl tert-butyl ether	8.05	59	530843	50.07 ug/L 99
36) ethyl acetate	8.23	45	15325	46.47 ug/L 97
37) 2,2-dichloropropane	8.34	77	258468	46.59 ug/L 90
38) cis-1,2-dichloroethene	8.30	96	169413	51.14 ug/L 96

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
39) propionitrile	8.30	54	194834	493.44	ug/L	96
40) methyl acrylate	8.31	85	15662	51.05	ug/L #	88
41) methacrylonitrile	8.47	67	45014	51.82	ug/L	96
42) bromochloromethane	8.57	128	82503	52.47	ug/L	96
43) tetrahydrofuran	8.58	72	14992	49.08	ug/L	95
44) chloroform	8.64	83	254503	49.89	ug/L	100
45) tert-butyl formate	8.68	59	113046	37.48	ug/L	99
47) 1,1,1-trichloroethane	8.90	97	271581	49.24	ug/L	98
48) cyclohexane	9.01	84	278599	48.02	ug/L	96
50) 1,1-dichloropropene	9.04	75	164164	49.51	ug/L	100
51) carbon tetrachloride	9.08	117	227135	48.70	ug/L	98
52) tert-amyl alcohol	9.14	73	40702	253.97	ug/L #	75
53) isopropyl acetate	9.16	87	23346	49.96	ug/L #	91
56) n-butyl alcohol	9.67	56	203429	2499.28	ug/L	98
57) 2,2,4-trimethylpentane	9.35	57	624186	51.64	ug/L	99
58) benzene	9.27	78	533667	51.42	ug/L	100
59) tert-amyl methyl ether	9.34	73	476931	51.56	ug/L	98
60) heptane	9.49	57	113887	55.55	ug/L	97
61) 1,2-dichloroethane	9.29	62	145708	47.74	ug/L	99
62) ethyl acrylate	9.91	55	134580	55.79	ug/L	99
63) trichloroethene	9.94	95	134307	54.14	ug/L	99
64) 2-chloroethyl vinyl ether	10.70	63	370664	270.32	ug/L	98
65) methyl methacrylate	10.17	100	29703	54.52	ug/L #	65
66) methylcyclohexane	10.24	83	309315	50.90	ug/L	99
67) 1,2-dichloropropane	10.22	63	135139	49.27	ug/L	97
68) dibromomethane	10.33	93	81090	53.34	ug/L	92
69) bromodichloromethane	10.47	83	173726	51.08	ug/L	100
70) 2-nitropropane	10.67	41	39884	52.46	ug/L	95
71) epichlorohydrin	10.79	57	58685	262.07	ug/L	95
72) cis-1,3-dichloropropene	10.92	75	208432	53.43	ug/L	98
73) 4-methyl-2-pentanone	11.02	58	195446	206.63	ug/L	94
74) isoamyl alcohol	11.01	70	81539	1052.71	ug/L	98
77) toluene	11.31	92	332264	54.08	ug/L	99
78) ethyl methacrylate	11.48	69	147504	54.01	ug/L	99
79) trans-1,3-dichloropropene	11.50	75	166083	51.28	ug/L	97
80) 1,1,2-trichloroethane	11.73	83	97685	53.36	ug/L	94
82) 2-hexanone	11.90	58	167074	213.99	ug/L	96
83) 1,3-dichloropropane	11.92	76	175251	51.63	ug/L	96
84) butyl acetate	11.97	56	77565	53.33	ug/L	98
85) dibromochloromethane	12.19	129	141036	54.83	ug/L	98
86) 1,2-dibromoethane	12.36	107	131079	53.52	ug/L	100
87) n-butyl ether	12.81	57	635208	54.62	ug/L	99
88) chlorobenzene	12.86	112	374388	53.59	ug/L	97
89) 1,1,1,2-tetrachloroethane	12.94	131	170476	55.66	ug/L	99
90) ethylbenzene	12.93	91	644607	53.81	ug/L	99
91) m,p-xylene	13.06	106	510099	109.06	ug/L	98
92) o-xylene	13.50	91	573358	54.81	ug/L	100
93) styrene	13.51	104	426870	57.13	ug/L	98
94) butyl acrylate	13.30	55	251367	54.69	ug/L	99
95) isopropylbenzene	13.88	105	785827	57.51	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81334.D
 Acq On : 25 Apr 2018 10:03 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

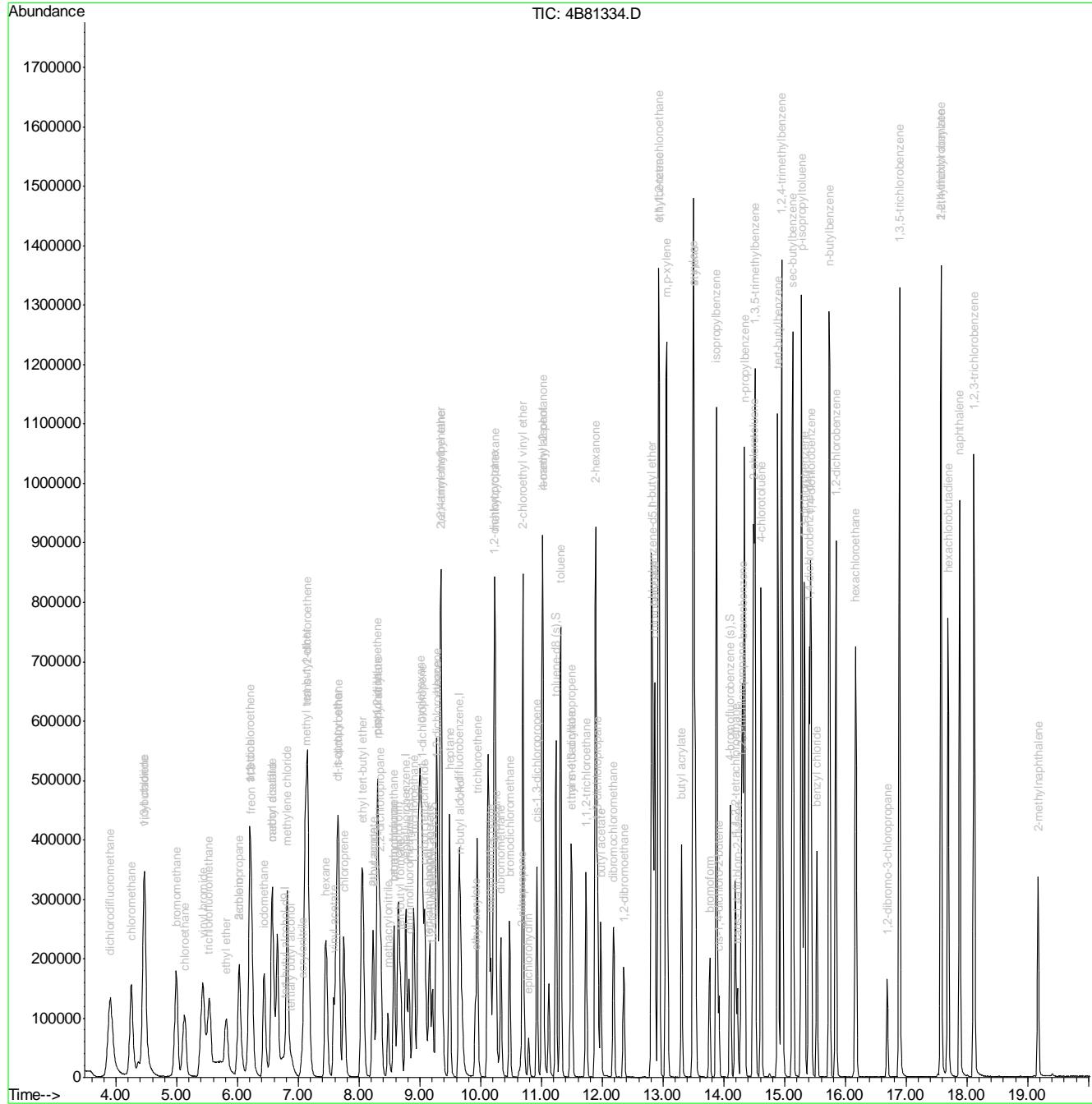
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
96) bromoform	13.77	173	100814	55.61	ug/L	98
97) cis-1,4-dichloro-2-butene	13.92	88	30599	42.02	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.19	83	178434	53.64	ug/L	99
101) trans-1,4-dichloro-2-buten	14.22	53	28224	56.73	ug/L	95
102) 1,2,3-trichloropropane	14.29	110	43815	53.24	ug/L	96
103) bromobenzene	14.31	156	195687	56.09	ug/L	97
104) n-propylbenzene	14.34	91	846588	56.33	ug/L	100
105) 2-chlorotoluene	14.48	126	183252	55.63	ug/L	97
106) 4-chlorotoluene	14.61	91	491051	56.23	ug/L	99
108) 1,3,5-trimethylbenzene	14.51	105	647734	57.52	ug/L	100
109) tert-butylbenzene	14.89	119	591196	60.08	ug/L	99
110) 1,2,4-trimethylbenzene	14.94	105	672777	59.22	ug/L	99
111) sec-butylbenzene	15.13	105	943869	61.12	ug/L	99
112) p-isopropyltoluene	15.28	119	806206	61.17	ug/L	100
113) 1,3-dichlorobenzene	15.33	146	379849	53.93	ug/L	99
114) 1,4-dichlorobenzene	15.43	146	379660	53.52	ug/L	99
115) 1,2-dichlorobenzene	15.84	146	411942	54.34	ug/L	98
116) benzyl chloride	15.53	91	281468	43.06	ug/L	99
118) n-butylbenzene	15.73	92	408883	59.87	ug/L	99
120) hexachloroethane	16.17	201	152841	60.84	ug/L	98
121) 1,2-dibromo-3-chloropropan	16.69	157	52632	55.68	ug/L	97
122) 1,3,5-trichlorobenzene	16.89	180	466010	57.29	ug/L	97
123) 1,2,4-trichlorobenzene	17.57	180	425563	60.29	ug/L	97
124) 2-ethylhexyl acrylate	17.58	70	47592	11.13	ug/L	97
125) hexachlorobutadiene	17.69	225	194140	57.15	ug/L	100
126) naphthalene	17.88	128	808877	57.94	ug/L	99
127) 1,2,3-trichlorobenzene	18.12	180	387893	60.64	ug/L	99
128) 2-methylnaphthalene	19.17	142	191094	26.54	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370
Data File : 4B81334.D
Acq On : 25 Apr 2018 10:03 pm
Operator : HueanhT
Sample : ICV3370-50
Misc : MS25764,V4B3370,,5,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 26 08:34:43 2018
Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 26 08:33:14 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81335.D
 Acq On : 25 Apr 2018 10:31 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 26 08:35:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, Rxi624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) tert butyl alcohol-d9	6.77	65	149404	500.00	ug/L	0.00
5) pentafluorobenzene	8.77	168	260101	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.65	114	331948	50.00	ug/L	0.00
75) chlorobenzene-d5	12.83	117	326746	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.40	152	219679	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	8.82	113	111891	47.98	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	95.96%
55) 1,2-dichloroethane-d4 (s)	9.21	65	102891	47.71	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.42%
76) toluene-d8 (s)	11.24	98	385702	48.73	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.46%
99) 4-bromofluorobenzene (s)	14.10	95	153490	48.12	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.24%

Target Compounds

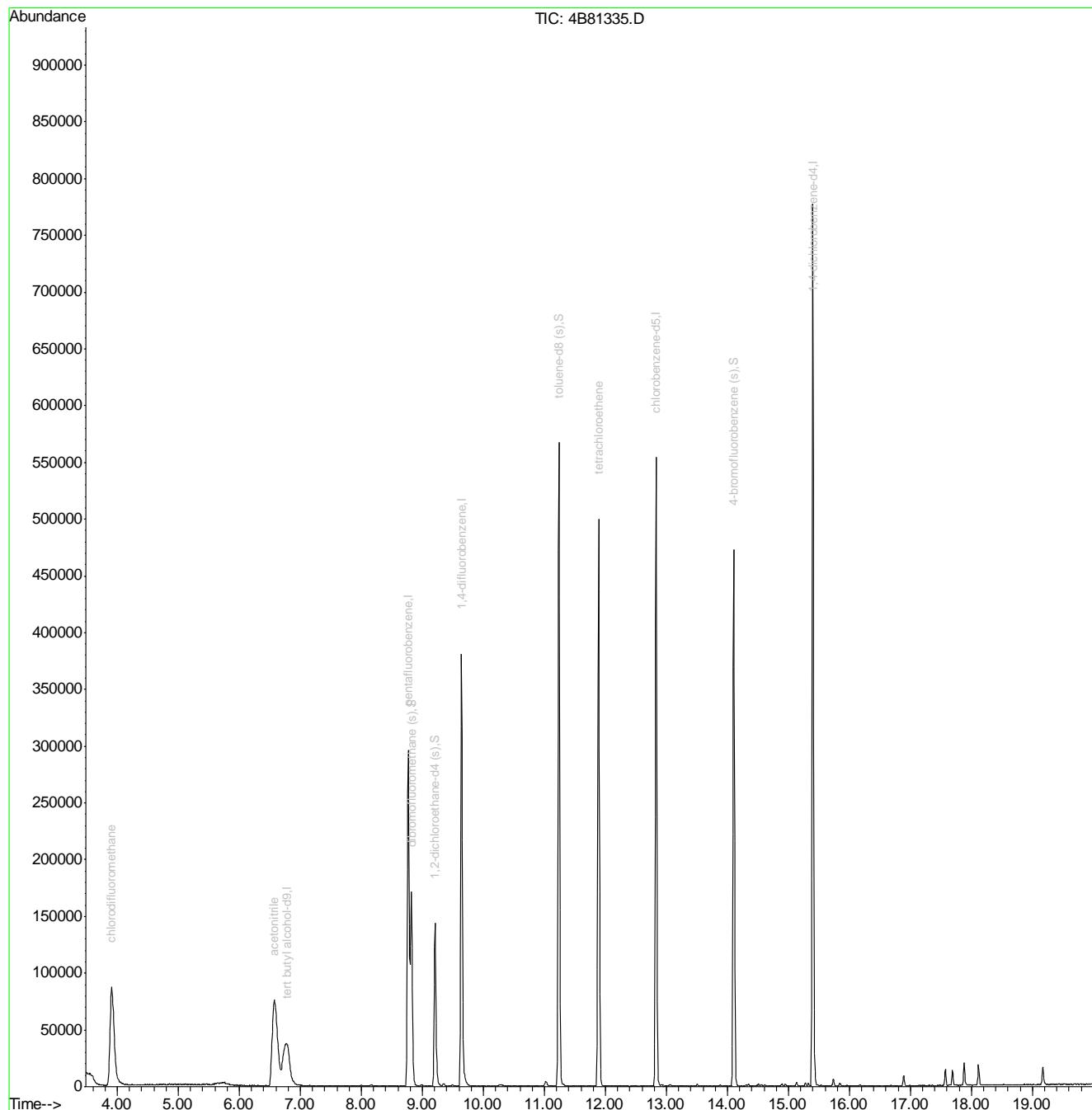
				Qvalue
6) chlorodifluoromethane	3.91	51	289399	44.59 ug/L 98
21) acetonitrile	6.57	41	262148	526.27 ug/L 98
81) tetrachloroethene	11.89	164	127408	52.83 ug/L 99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V4B3370\
 Data File : 4B81335.D
 Acq On : 25 Apr 2018 10:31 pm
 Operator : HueanhT
 Sample : ICV3370-50
 Misc : MS25764,V4B3370,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 26 08:35:13 2018
 Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 26 08:33:14 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81664.d
 Acq On : 8 May 2018 7:05 pm
 Operator : HueanhT
 Sample : cc3370-50 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:06 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) tert butyl alcohol-d9	6.790	65	123892	500.00	ug/L	0.02
5) pentafluorobenzene	8.767	168	233577	50.00	ug/L	0.00
54) 1,4-difluorobenzene	9.641	114	310293	50.00	ug/L	0.00
75) chlorobenzene-d5	12.831	117	308946	50.00	ug/L	0.00
98) 1,4-dichlorobenzene-d4	15.399	152	201762	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	8.820	113	110713	52.86	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 105.72%		
55) 1,2-dichloroethane-d4 (s)	9.207	65	103236	51.21	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery	= 102.42%		
76) toluene-d8 (s)	11.236	98	375905	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.44%		
99) 4-bromofluorobenzene (s)	14.102	95	148725	50.77	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 101.54%		
Target Compounds						
3) tertiary butyl alcohol	6.879	59	79876	246.33	ug/L	96
4) 1,4-dioxane	10.263	88	36011	1208.68	ug/L	91
6) chlorodifluoromethane	3.909	51	235865	40.47	ug/L	98
7) dichlorodifluoromethane	3.898	85	329278	54.72	ug/L	98
8) chloromethane	4.249	50	412790	56.50	ug/L	97
9) vinyl chloride	4.463	62	333250	48.57	ug/L	98
11) bromomethane	4.991	94	229361	46.49	ug/L	99
12) chloroethane	5.127	64	174857	47.14	ug/L	97
13) trichlorofluoromethane	5.540	101	311342	47.93	ug/L	99
14) vinyl bromide	5.425	106	223540	50.58	ug/L	97
15) ethyl ether	5.823	74	70266	51.89	ug/L	98
16) 2-chloropropane	6.027	43	284219	53.40	ug/L	97
17) acrolein	6.027	56	30517	52.51	ug/L	95
18) freon 113	6.226	151	165793	56.37	ug/L	95
19) 1,1-dichloroethene	6.205	61	258066	53.13	ug/L	99
20) acetone	6.205	58	46435	212.94	ug/L	92
21) acetonitrile	6.566	41	220185	492.23	ug/L	97
22) iodomethane	6.435	142	278719	50.93	ug/L	99
23) carbon disulfide	6.566	76	548397	52.52	ug/L	98
24) methylene chloride	6.817	84	180997	50.93	ug/L	99
25) methyl acetate	6.576	43	92708	50.46	ug/L	99
26) methyl tert butyl ether	7.115	73	458483	50.52	ug/L	98
27) trans-1,2-dichloroethene	7.157	61	221221	51.79	ug/L	97
28) hexane	7.449	56	176598	92.60	ug/L	97
29) di-isopropyl ether	7.643	45	542536	51.76	ug/L	99
30) 2-butanone	8.229	72	44052	212.16	ug/L	95
31) 1,1-dichloroethane	7.664	63	262511	51.38	ug/L	99
32) chloroprene	7.748	53	190246	53.53	ug/L	97
33) acrylonitrile	7.062	53	52807	54.94	ug/L	94
34) vinyl acetate	7.585	86	15827	48.72	ug/L	97
35) ethyl tert-butyl ether	8.051	59	496432	51.28	ug/L	98
36) ethyl acetate	8.229	45	14635	48.61	ug/L #	86
37) 2,2-dichloropropane	8.344	77	261305	51.59	ug/L	96
38) cis-1,2-dichloroethene	8.302	96	154789	51.18	ug/L	100
39) propionitrile	8.297	54	183901	510.13	ug/L	96
40) methyl acrylate	8.312	85	14711	52.52	ug/L	95
41) methacrylonitrile	8.475	67	41040	51.75	ug/L	95
42) bromochloromethane	8.574	128	75499	52.59	ug/L	96
43) tetrahydrofuran	8.584	72	14514	52.04	ug/L	90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81664.d
 Acq On : 8 May 2018 7:05 pm
 Operator : HueanhT
 Sample : cc3370-50 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:06 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
44) chloroform	8.642	83	241547	51.86	ug/L	98
45) tert-butyl formate	8.679	59	142015	51.57	ug/L	98
47) 1,1,1-trichloroethane	8.898	97	277624	55.13	ug/L	99
48) cyclohexane	9.003	84	268320	50.66	ug/L	95
50) 1,1-dichloropropene	9.039	75	158364	52.31	ug/L	99
51) carbon tetrachloride	9.081	117	235548	55.31	ug/L	99
52) tert-amyl alcohol	9.154	73	33597	229.62	ug/L	91
53) isopropyl acetate	9.160	87	21299	49.92	ug/L	#
56) n-butyl alcohol	9.672	56	188370	2412.94	ug/L	98
57) 2,2,4-trimethylpentane	9.353	57	579933	50.02	ug/L	99
58) benzene	9.270	78	506678	50.90	ug/L	99
59) tert-amyl methyl ether	9.338	73	436455	49.20	ug/L	99
60) heptane	9.489	57	96133	48.89	ug/L	96
61) 1,2-dichloroethane	9.290	62	145215	49.61	ug/L	99
62) ethyl acrylate	9.913	55	117552	50.81	ug/L	100
63) trichloroethylene	9.944	95	124623	52.38	ug/L	96
64) 2-chloroethyl vinyl ether	10.697	63	332830	253.08	ug/L	99
65) methyl methacrylate	10.169	100	25822	49.42	ug/L	91
66) methylcyclohexane	10.237	83	307505	52.76	ug/L	98
67) 1,2-dichloropropane	10.221	63	134091	50.97	ug/L	100
68) dibromomethane	10.331	93	75825	52.01	ug/L	97
69) bromodichloromethane	10.473	83	171672	52.63	ug/L	98
70) 2-nitropropane	10.666	41	37340	51.21	ug/L	94
71) epichlorohydrin	10.786	57	52350	243.75	ug/L	95
72) cis-1,3-dichloropropene	10.922	75	191839	51.27	ug/L	98
73) 4-methyl-2-pentanone	11.016	58	187465	206.65	ug/L	91
74) isoamyl alcohol	11.016	70	74560	1003.65	ug/L	#
77) toluene	11.315	92	305392	50.60	ug/L	99
78) ethyl methacrylate	11.477	69	139750	52.09	ug/L	97
79) trans-1,3-dichloropropene	11.498	75	166492	52.32	ug/L	93
80) 1,1,2-trichloroethane	11.733	83	91961	51.12	ug/L	96
81) tetrachloroethene	11.890	164	116683	51.17	ug/L	100
82) 2-hexanone	11.895	58	155313	202.47	ug/L	98
83) 1,3-dichloropropane	11.921	76	165233	49.54	ug/L	95
84) butyl acetate	11.974	56	70280	49.18	ug/L	95
85) dibromochloromethane	12.188	129	133606	52.87	ug/L	98
86) 1,2-dibromoethane	12.350	107	119655	49.73	ug/L	100
87) n-butyl ether	12.810	57	595457	52.11	ug/L	99
88) chlorobenzene	12.863	112	341218	49.71	ug/L	99
89) 1,1,1,2-tetrachloroethane	12.936	131	155277	51.60	ug/L	99
90) ethylbenzene	12.925	91	600268	51.00	ug/L	99
91) m,p-xylene	13.056	106	468745	102.00	ug/L	100
92) o-xylene	13.496	91	539644	52.51	ug/L	98
93) styrene	13.511	104	392723	53.50	ug/L	99
94) butyl acrylate	13.302	55	230999	51.15	ug/L	99
95) isopropylbenzene	13.877	105	723310	53.87	ug/L	99
96) bromoform	13.762	173	97642	54.82	ug/L	98
97) cis-1,4-dichloro-2-butene	13.919	88	36854	50.67	ug/L	96
100) 1,1,2,2-tetrachloroethane	14.186	83	173839	52.14	ug/L	98
101) trans-1,4-dichloro-2-b...	14.223	53	29869	59.89	ug/L	96
102) 1,2,3-trichloropropane	14.285	110	42016	50.94	ug/L	97
103) bromobenzene	14.306	156	179721	51.40	ug/L	100
104) n-propylbenzene	14.338	91	795268	52.79	ug/L	100
105) 2-chlorotoluene	14.484	126	171558	51.96	ug/L	96
106) 4-chlorotoluene	14.610	91	449369	51.33	ug/L	99
108) 1,3,5-trimethylbenzene	14.510	105	604888	53.59	ug/L	99
109) tert-butylbenzene	14.887	119	529709	53.70	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
 Data File : 4b81664.d
 Acq On : 8 May 2018 7:05 pm
 Operator : HueanhT
 Sample : cc3370-50 Inst : MS4B
 Misc : MS26139,V4B3388,5,,,1
 ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
 Quant Results File: M4B3370.RES
 Quant Time: May 09 23:38:06 2018
 Quant Title : SW846 8260C, RxI624Sil MS 60m x 0.25mm x 1.4um
 QLast Update : Tue May 08 14:24:00 2018
 Response via : Initial Calibration

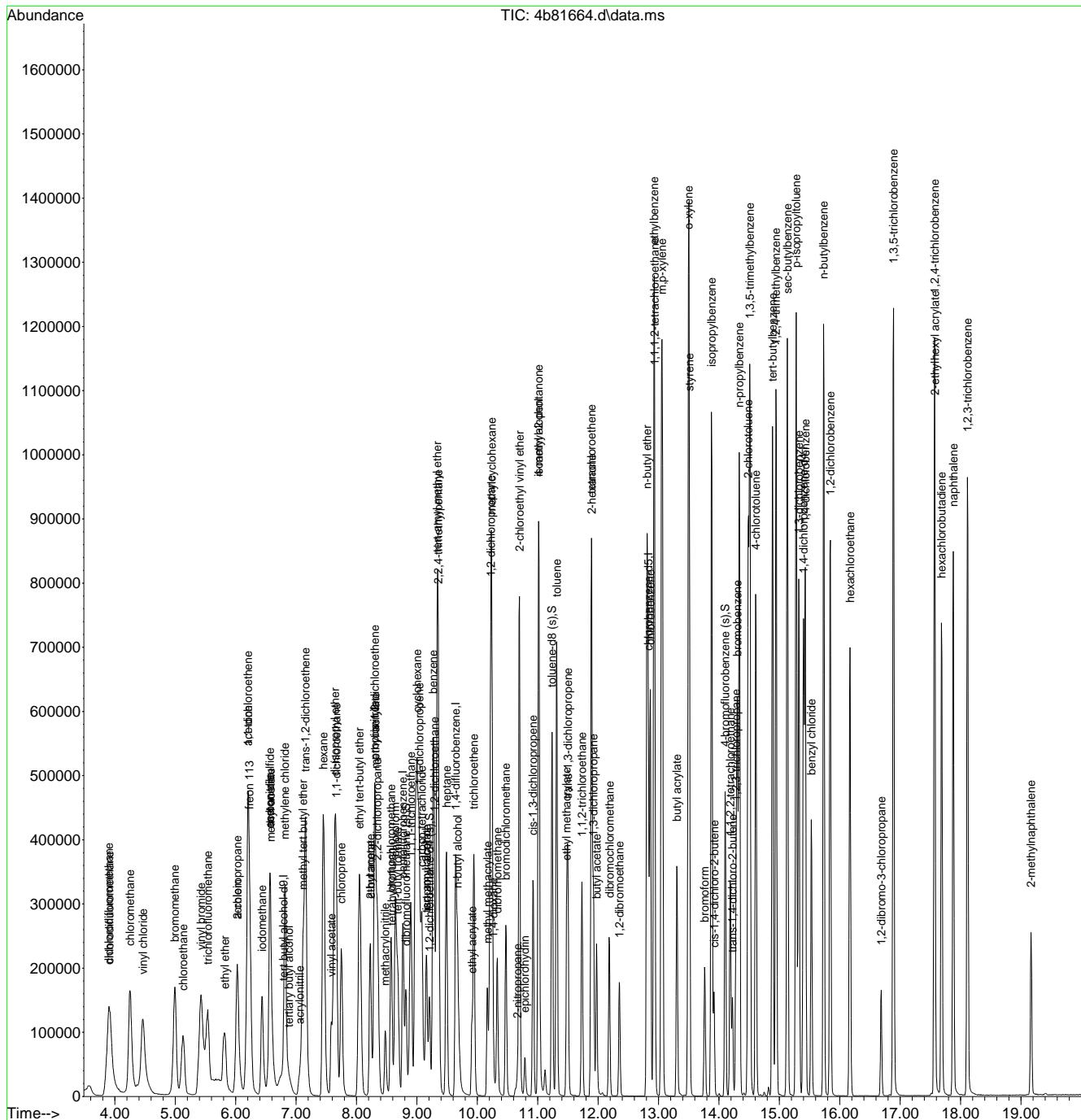
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
110) 1,2,4-trimethylbenzene	14.944	105	613891	53.91	ug/L	99
111) sec-butylbenzene	15.133	105	862789	55.74	ug/L	100
112) p-isopropyltoluene	15.279	119	725817	54.94	ug/L	99
113) 1,3-dichlorobenzene	15.321	146	353248	50.03	ug/L	98
114) 1,4-dichlorobenzene	15.431	146	352296	49.55	ug/L	100
115) 1,2-dichlorobenzene	15.844	146	383823	50.52	ug/L	99
116) benzyl chloride	15.530	91	307809	46.98	ug/L	98
118) n-butylbenzene	15.734	92	374265	54.67	ug/L	99
120) hexachloroethane	16.168	201	137894	54.76	ug/L	97
121) 1,2-dibromo-3-chloropr...	16.686	157	48695	51.39	ug/L	98
122) 1,3,5-trichlorobenzene	16.890	180	413700	50.74	ug/L	97
123) 1,2,4-trichlorobenzene	17.570	180	370246	52.33	ug/L	98
124) 2-ethylhexyl acrylate	17.575	70	25213	6.21	ug/L	90
125) hexachlorobutadiene	17.685	225	173471	50.94	ug/L	99
126) naphthalene	17.879	128	677348	48.40	ug/L	99
127) 1,2,3-trichlorobenzene	18.114	180	339493	52.94	ug/L	98
128) 2-methylnaphthalene	19.165	142	133273	18.46	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-10-18\v4b3388\
Data File : 4b81664.d
Acq On : 8 May 2018 7:05 pm
Operator : HueanhT
Sample : cc3370-50 Inst : MS4E
Misc : MS26139,V4B3388,5,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\M4B3370.M
Quant Results File: M4B3370.RES
Quant Time: May 09 23:38:06 2018
Quant Title : SW846 8260C, Rx1624Sil MS 60m x 0.25mm x 1.4um
QLast Update : Tue May 08 14:24:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240802.D
 Acq On : 3 Apr 2018 5:52 pm
 Operator : JessicaP
 Sample : ic9165-0.2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 11:17:00 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:37:19 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.831	65	342580	500.00	ug/L	0.02
5) pentafluorobenzene	10.185	168	234670	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.121	114	348075	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	267015	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	149194	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.200	113	114906	49.13	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.26%		
55) 1,2-dichloroethane-d4 (s)	10.645	65	123441	49.78	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	99.56%		
77) toluene-d8 (s)	12.862	98	355597	49.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.68%		
101) 4-bromofluorobenzene (s)	15.807	95	119110	49.01	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.02%		

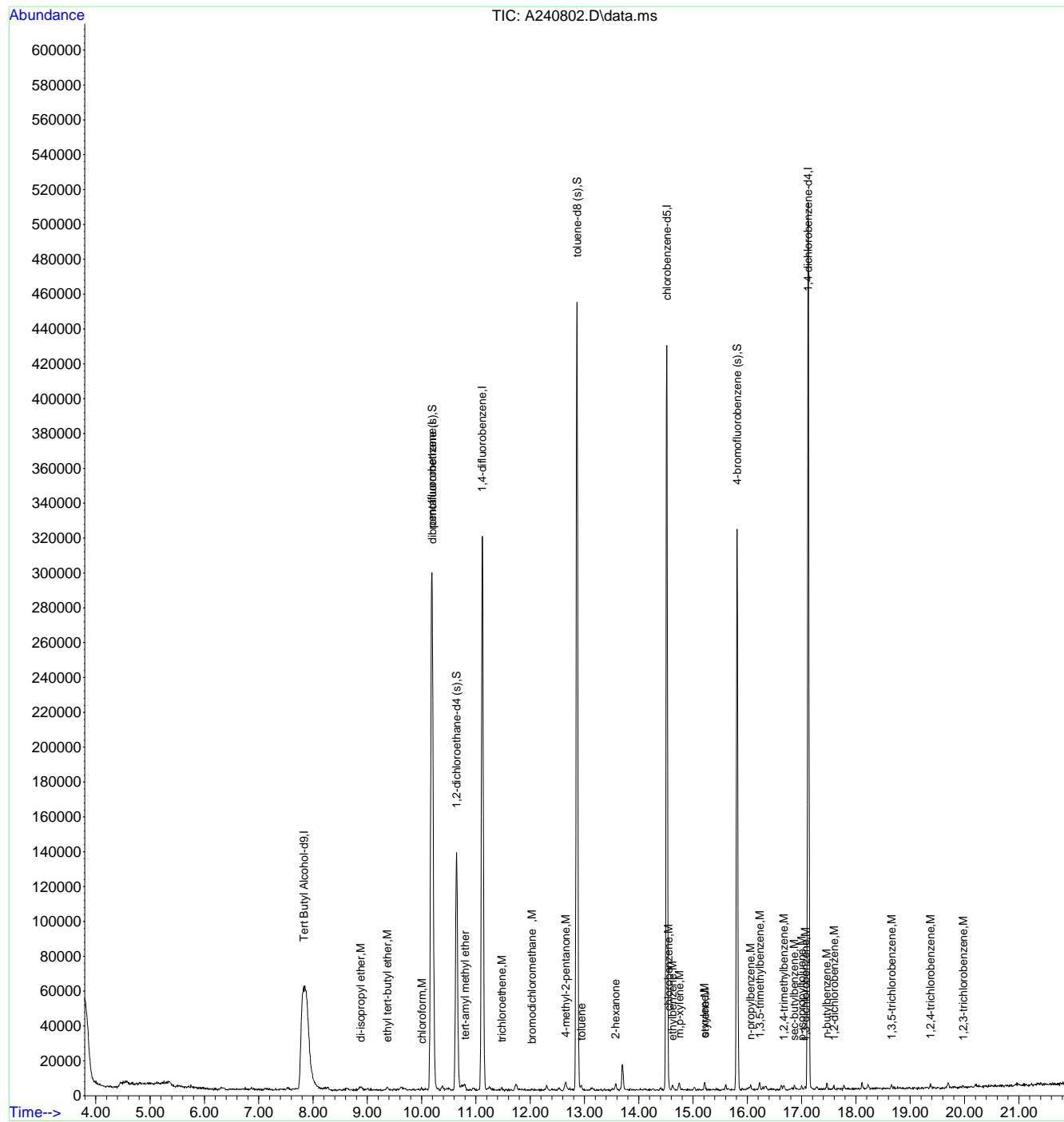
Target Compounds					Qvalue	
30) di-isopropyl ether	8.877	45	1927	0.23	ug/L	90
31) ethyl tert-butyl ether	9.369	59	1572	0.21	ug/L	98
44) chloroform	10.007	83	947	0.24	ug/L	85
58) tert-amyl methyl ether	10.802	73	1748	0.23	ug/L	# 62
64) trichloroethene	11.476	95	393	0.20	ug/L	# 55
71) bromodichloromethane	12.031	83	516	0.19	ug/L	83
74) 4-methyl-2-pentanone	12.648	58	968	0.77	ug/L	# 29
78) toluene	12.946	92	1025	0.23	ug/L	96
82) 2-hexanone	13.579	58	828	0.85	ug/L	89
90) chlorobenzene	14.552	112	895	0.20	ug/L	79
92) ethylbenzene	14.625	91	1836	0.23	ug/L	95
93) m,p-xylene	14.745	106	1406	0.47	ug/L	# 72
94) o-xylene	15.206	106	586	0.18	ug/L	# 67
95) styrene	15.216	104	999	0.21	ug/L	72
106) n-propylbenzene	16.058	91	2347	0.23	ug/L	90
110) 1,3,5-trimethylbenzene	16.225	105	1762	0.22	ug/L	92
112) 1,2,4-trimethylbenzene	16.670	105	1747	0.23	ug/L	89
113) sec-butylbenzene	16.869	105	2133	0.21	ug/L	94
114) 1,3-dichlorobenzene	17.067	146	849	0.22	ug/L	83
115) p-isopropyltoluene	17.000	119	1735	0.20	ug/L	91
117) 1,2-dichlorobenzene	17.591	146	857	0.21	ug/L	82
119) n-butylbenzene	17.465	92	1013	0.23	ug/L	97
122) 1,3,5-trichlorobenzene	18.652	180	888	0.23	ug/L	77
124) 1,2,4-trichlorobenzene	19.379	180	766	0.23	ug/L	95
127) 1,2,3-trichlorobenzene	19.970	180	632	0.21	ug/L	# 80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240802.D
 Acq On : 3 Apr 2018 5:52 pm
 Operator : JessicaP
 Sample : ic9165-0.2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 11:17:00 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:37:19 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.813	65	347855	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	232400	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	336747	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	248278	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.118	152	146914	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.204	113	115871	49.93	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 99.86%		
55) 1,2-dichloroethane-d4 (s)	10.638	65	123162	51.32	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	= 102.64%		
77) toluene-d8 (s)	12.860	98	343433	51.75	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 103.50%		
101) 4-bromofluorobenzene (s)	15.810	95	115335	48.09	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 96.18%		

Target Compounds					Qvalue	
27) methyl tert butyl ether	8.268	73	2745	0.53	ug/L	# 51
28) trans-1,2-dichloroethene	8.279	96	1002	0.46	ug/L	# 76
30) di-isopropyl ether	8.896	45	4307	0.53	ug/L	74
31) ethyl tert-butyl ether	9.367	59	3462	0.46	ug/L	92
39) cis-1,2-dichloroethene	9.613	96	1330	0.54	ug/L	80
44) chloroform	10.000	83	1995	0.53	ug/L	88
48) cyclohexane	10.387	84	1861	0.52	ug/L	# 86
49) 1,1,1-trichloroethane	10.298	97	1698	0.49	ug/L	86
51) 1,1-dichloropropene	10.465	75	1501	0.52	ug/L	# 67
52) carbon tetrachloride	10.502	117	1535	0.51	ug/L	# 72
56) benzene	10.742	78	4636	0.55	ug/L	94
57) iso-octane	10.784	57	4478	0.54	ug/L	92
58) tert-amyl methyl ether	10.794	73	3840	0.53	ug/L	85
59) heptane	10.951	71	867	0.55	ug/L	# 57
62) n-butyl alcohol	11.223	56	3292	25.21	ug/L	92
64) trichloroethene	11.464	95	872	0.46	ug/L	82
66) methylcyclohexane	11.731	83	2344	0.55	ug/L	89
67) 2-chloroethyl vinyl ether	12.306	63	3506	2.80	ug/L	94
70) dibromomethane	11.898	93	644	0.50	ug/L	95
71) bromodichloromethane	12.039	83	1353	0.51	ug/L	93
73) cis-1,3-dichloropropene	12.531	75	1702	0.54	ug/L	66
74) 4-methyl-2-pentanone	12.651	58	2496	2.06	ug/L	# 84
78) toluene	12.939	92	2261	0.55	ug/L	100
79) trans-1,3-dichloropropene	13.132	75	1259	0.54	ug/L	# 51
81) 1,1,2-trichloroethane	13.368	83	582	0.46	ug/L	# 80
82) 2-hexanone	13.572	58	1830	2.04	ug/L	92
83) tetrachloroethene	13.577	166	772	0.47	ug/L	# 74
84) 1,3-dichloropropane	13.561	76	1367	0.56	ug/L	66
88) 1,2-dibromoethane	14.032	107	656	0.44	ug/L	95
90) chlorobenzene	14.555	112	2042	0.50	ug/L	91
91) 1,1,1,2-tetrachloroethane	14.613	131	1106	0.56	ug/L	# 75
92) ethylbenzene	14.623	91	3969	0.55	ug/L	89
93) m,p-xylene	14.743	106	2849	1.04	ug/L	100
94) o-xylene	15.209	106	1564	0.51	ug/L	# 71
95) styrene	15.214	104	2619	0.58	ug/L	98
97) bromoform	15.491	173	458	0.42	ug/L	78
98) isopropylbenzene	15.601	105	4238	0.51	ug/L	95
102) bromobenzene	16.035	156	980	0.50	ug/L	# 52
103) 1,1,2,2-tetrachloroethane	15.910	83	1456	0.51	ug/L	85
106) n-propylbenzene	16.061	91	4900	0.50	ug/L	92
107) 2-chlorotoluene	16.218	126	914	0.45	ug/L	# 72

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration

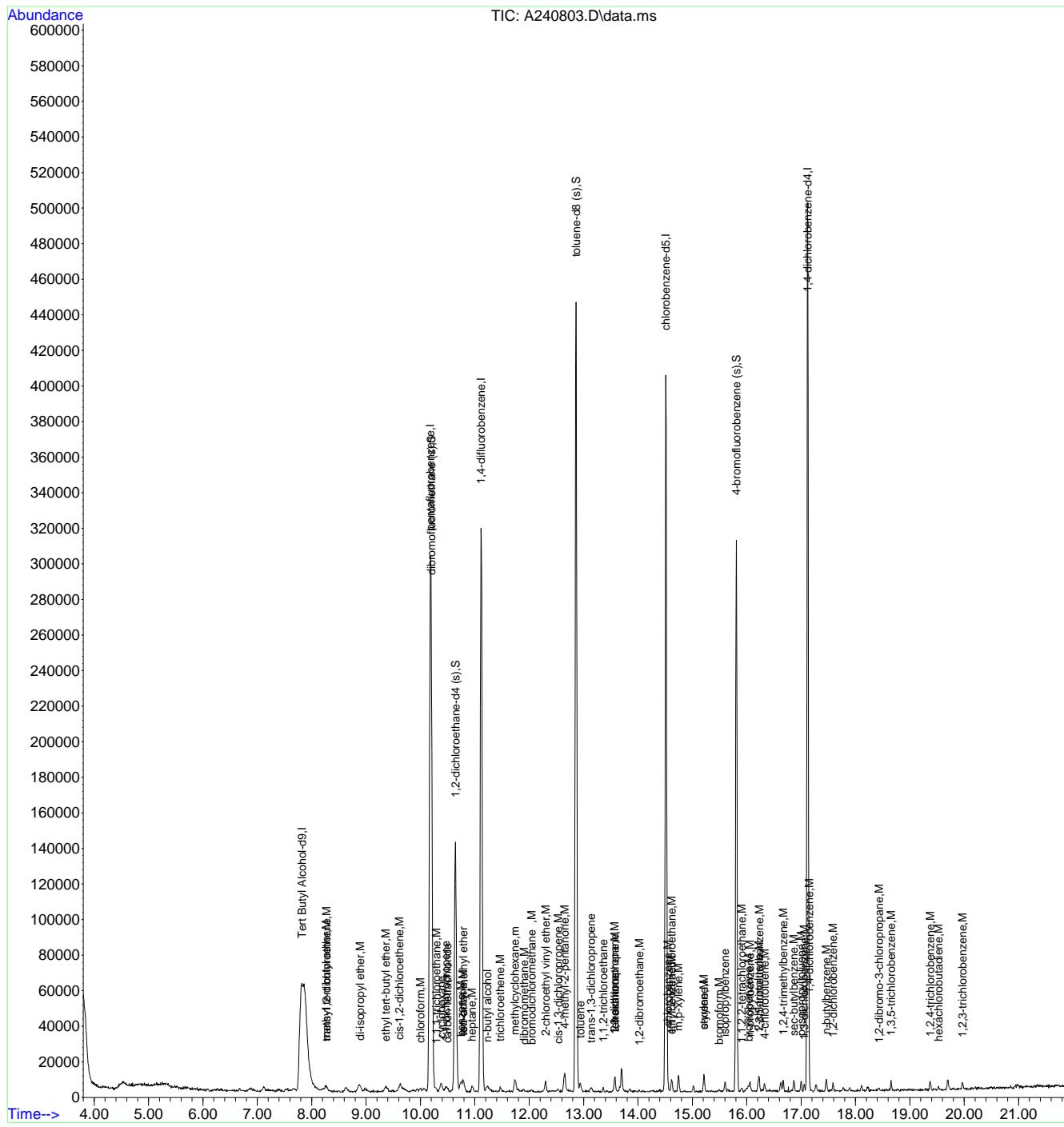
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 4-chlorotoluene	16.328	91	2704	0.51	ug/L	73
110) 1,3,5-trimethylbenzene	16.234	105	3796	0.49	ug/L	85
112) 1,2,4-trimethylbenzene	16.673	105	3699	0.49	ug/L	90
113) sec-butylbenzene	16.867	105	4569	0.45	ug/L	92
114) 1,3-dichlorobenzene	17.055	146	1806	0.49	ug/L	97
115) p-isopropyltoluene	16.997	119	4022	0.48	ug/L	92
116) 1,4-dichlorobenzene	17.154	146	2097	0.55	ug/L	94
117) 1,2-dichlorobenzene	17.588	146	2311	0.57	ug/L	97
119) n-butylbenzene	17.463	92	2328	0.53	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.425	157	381	0.50	ug/L	71
122) 1,3,5-trichlorobenzene	18.655	180	1949	0.51	ug/L	86
124) 1,2,4-trichlorobenzene	19.372	180	1766	0.53	ug/L	93
125) hexachlorobutadiene	19.524	225	589	0.42	ug/L	79
127) 1,2,3-trichlorobenzene	19.968	180	1646	0.54	ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\

Data File : A240804.D

Acq On : 3 Apr 2018 6:50 pm

Operator : JessicaP

Sample : ic9165-1

Misc : MS25128,VA9165,5,,,1

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018

Quant Method : C:\msdchem\1\METHODS\MA9165.M

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Thu Apr 05 10:25:00 2018

Response via : Initial Calibration

7.7.29

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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	337056	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	227829	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	340121	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	264304	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	148873	50.00	ug/L	0.00

System Monitoring Compounds

46) dibromofluoromethane (s)	10.201	113	114262	50.22	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.44%	
55) 1,2-dichloroethane-d4 (s)	10.640	65	120903	49.88	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 99.76%	
77) toluene-d8 (s)	12.863	98	354324	50.15	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 100.30%	
101) 4-bromofluorobenzene (s)	15.807	95	117856	48.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 97.00%	

Target Compounds

				Qvalue	
3) tertiary butyl alcohol	7.988	59	3003	5.51	ug/L 55
7) dichlorodifluoromethane	4.170	85	3522	0.95	ug/L 81
10) chloromethane	4.505	50	5310	1.97	ug/L 80
11) vinyl chloride	4.798	62	4227	0.95	ug/L 62
13) bromomethane	5.525	94	2594	0.99	ug/L 77
14) chloroethane	5.708	64	3398	1.40	ug/L 74
15) vinyl bromide	6.095	106	2145	0.95	ug/L # 94
16) trichlorofluoromethane	6.194	101	3422	0.98	ug/L 71
17) ethyl ether	6.670	74	748	0.95	ug/L # 60
19) freon 113	7.110	151	1853	1.13	ug/L # 90
20) 1,1-dichloroethene	7.120	96	2122	1.03	ug/L # 74
21) acetone	7.157	58	1091	3.21	ug/L # 63
23) iodomethane	7.397	142	3461	1.13	ug/L 92
24) carbon disulfide	7.538	76	6985	1.18	ug/L 95
25) methylene chloride	7.852	84	2793	1.10	ug/L 90
27) methyl tert butyl ether	8.250	73	5639	1.10	ug/L 98
28) trans-1,2-dichloroethene	8.271	96	2510	1.19	ug/L 84
29) hexane	8.626	57	3788	1.22	ug/L 82
30) di-isopropyl ether	8.872	45	9081	1.14	ug/L 99
31) ethyl tert-butyl ether	9.359	59	7626	1.04	ug/L 91
32) 2-butanone	9.594	72	1452	4.31	ug/L # 87
33) 1,1-dichloroethane	8.856	63	5176	1.21	ug/L 97
34) chloroprene	8.987	53	3530	1.11	ug/L 91
38) 2,2-dichloropropane	9.651	77	4678	1.25	ug/L 84
39) cis-1,2-dichloroethene	9.625	96	2604	1.07	ug/L # 79
41) propionitrile	9.683	54	5626	10.32	ug/L 80
42) bromochloromethane	9.944	128	1673	1.39	ug/L # 56
44) chloroform	9.997	83	4057	1.10	ug/L 86
45) tert-butyl formate	10.065	59	2585	1.12	ug/L # 77
48) cyclohexane	10.373	84	3691	1.05	ug/L 92
49) 1,1,1-trichloroethane	10.300	97	3891	1.14	ug/L 84
51) 1,1-dichloropropene	10.473	75	3101	1.09	ug/L 84
52) carbon tetrachloride	10.499	117	3311	1.13	ug/L 90
56) benzene	10.739	78	9410	1.10	ug/L 96
57) iso-octane	10.771	57	9127	1.09	ug/L 94
58) tert-amyl methyl ether	10.797	73	7980	1.09	ug/L 91
59) heptane	10.954	71	1600	1.00	ug/L 94
61) 1,2-dichloroethane	10.729	62	3352	1.20	ug/L 88
62) n-butyl alcohol	11.215	56	7116	53.95	ug/L 92
63) ethyl acrylate	11.482	55	3569	1.19	ug/L 89
64) trichloroethene	11.472	95	2134	1.11	ug/L 89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\

Data File : A240804.D

Acq On : 3 Apr 2018 6:50 pm

Operator : JessicaP

Sample : ic9165-1

Misc : MS25128,VA9165,5,,,1

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018

Quant Method : C:\msdchem\1\METHODS\MA9165.M

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Thu Apr 05 10:25:00 2018

Response via : Initial Calibration

7.7.29

7

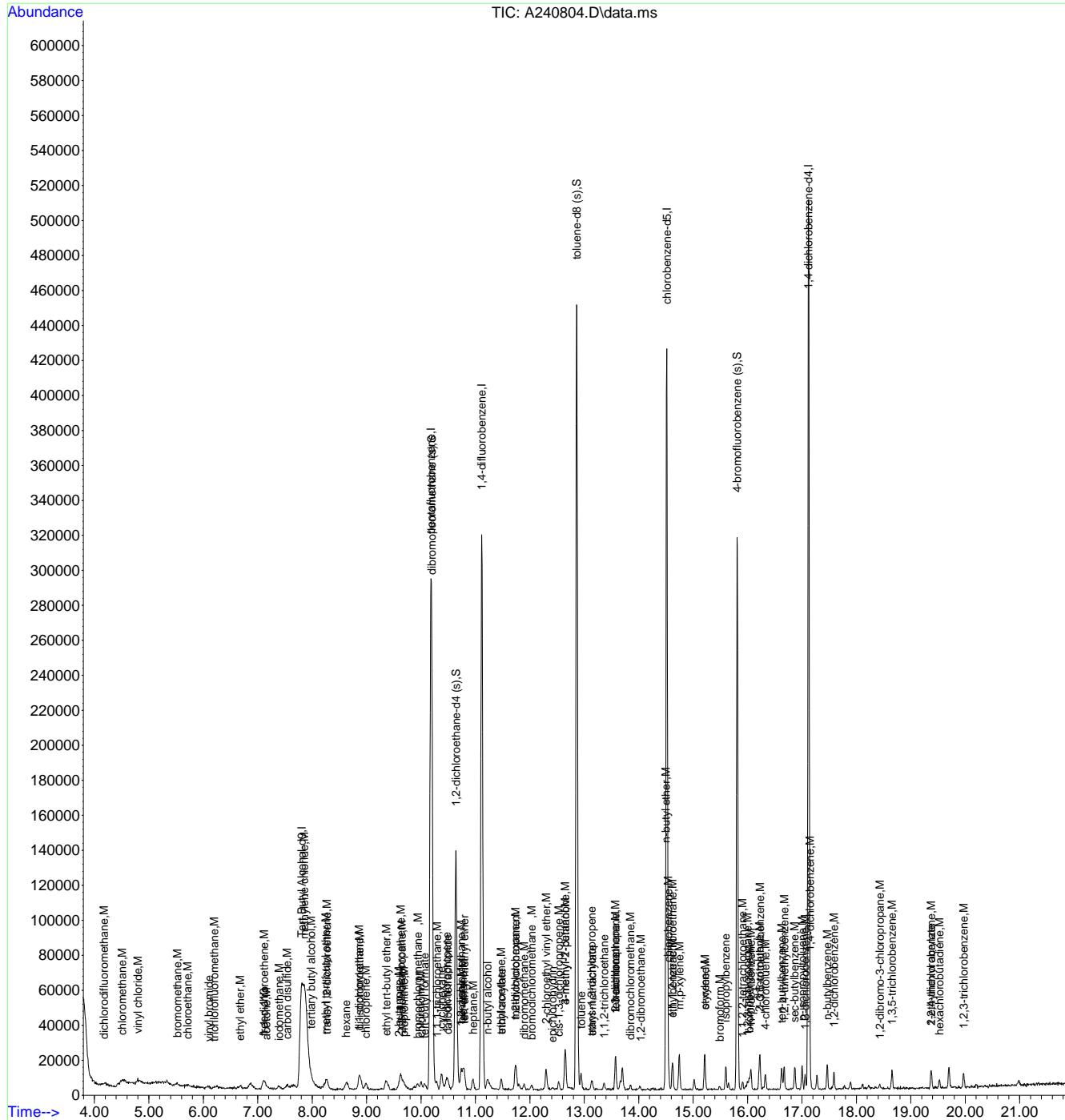
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) methylcyclohexane	11.733	83	4990	1.16	ug/L	95
67) 2-chloroethyl vinyl ether	12.298	63	6745	5.33	ug/L	88
69) 1,2-dichloropropane	11.743	63	2724	1.14	ug/L	94
70) dibromomethane	11.895	93	1320	1.02	ug/L	75
71) bromodichloromethane	12.031	83	2756	1.04	ug/L	91
72) epichlorohydrin	12.418	57	1876	5.49	ug/L #	82
73) cis-1,3-dichloropropene	12.528	75	3267	1.03	ug/L	78
74) 4-methyl-2-pentanone	12.643	58	5356	4.37	ug/L	94
75) 3-methyl-1-butanol	12.648	55	5389	23.65	ug/L	89
78) toluene	12.941	92	4738	1.08	ug/L #	80
79) trans-1,3-dichloropropene	13.135	75	2594	1.05	ug/L	96
80) ethyl methacrylate	13.145	69	1813	1.04	ug/L	85
81) 1,1,2-trichloroethane	13.360	83	1477	1.10	ug/L #	71
82) 2-hexanone	13.574	58	3998	4.19	ug/L	98
83) tetrachloroethene	13.579	166	1916	1.09	ug/L	90
84) 1,3-dichloropropane	13.564	76	2948	1.13	ug/L	96
87) dibromochloromethane	13.851	129	2132	1.15	ug/L	96
88) 1,2-dibromoethane	14.029	107	1652	1.04	ug/L	73
89) n-butyl ether	14.489	57	9242	1.10	ug/L	69
90) chlorobenzene	14.547	112	4668	1.08	ug/L	96
91) 1,1,1,2-tetrachloroethane	14.615	131	2051	0.98	ug/L	91
92) ethylbenzene	14.625	91	8396	1.09	ug/L	99
93) m,p-xylene	14.746	106	6003	2.06	ug/L	94
94) o-xylene	15.211	106	3563	1.09	ug/L	99
95) styrene	15.216	104	5079	1.06	ug/L	91
97) bromoform	15.488	173	1325	1.15	ug/L	85
98) isopropylbenzene	15.603	105	9344	1.06	ug/L	95
102) bromobenzene	16.032	156	2069	1.05	ug/L #	79
103) 1,1,2,2-tetrachloroethane	15.912	83	3083	1.08	ug/L	88
105) 1,2,3-trichloropropane	15.990	110	670	1.02	ug/L #	72
106) n-propylbenzene	16.058	91	10602	1.06	ug/L	93
107) 2-chlorotoluene	16.215	126	2161	1.04	ug/L	88
108) 4-chlorotoluene	16.325	91	5727	1.07	ug/L	91
110) 1,3,5-trimethylbenzene	16.226	105	7909	1.02	ug/L	94
111) tert-butylbenzene	16.623	134	1577	1.02	ug/L #	78
112) 1,2,4-trimethylbenzene	16.670	105	7825	1.03	ug/L	98
113) sec-butylbenzene	16.869	105	10350	1.01	ug/L	97
114) 1,3-dichlorobenzene	17.063	146	4143	1.11	ug/L	89
115) p-isopropyltoluene	17.005	119	8512	1.00	ug/L	96
116) 1,4-dichlorobenzene	17.151	146	4089	1.06	ug/L	92
117) 1,2-dichlorobenzene	17.591	146	4453	1.08	ug/L	93
119) n-butylbenzene	17.465	92	4642	1.05	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.433	157	846	1.09	ug/L	85
122) 1,3,5-trichlorobenzene	18.653	180	4406	1.14	ug/L	98
123) 2-ethylhexyl acrylate	19.369	70	651	0.22	ug/L #	81
124) 1,2,4-trichlorobenzene	19.374	180	3598	1.07	ug/L	85
125) hexachlorobutadiene	19.526	225	1498	1.05	ug/L	84
127) 1,2,3-trichlorobenzene	19.971	180	3216	1.05	ug/L	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240804.D
Acq On : 3 Apr 2018 6:50 pm
Operator : JessicaP
Sample : ic9165-1
Misc : MS25128,VA9165,5,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:25:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240805.D
 Acq On : 3 Apr 2018 7:19 pm
 Operator : JessicaP
 Sample : ic9165-2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:16:51 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.818	65	336365	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	228978	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.118	114	337437	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	264870	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	149290	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.198	113	114134	49.91	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 99.82%		
55) 1,2-dichloroethane-d4 (s)	10.643	65	120256	50.00	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	= 100.00%		
77) toluene-d8 (s)	12.860	98	354560	50.08	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 100.16%		
101) 4-bromofluorobenzene (s)	15.810	95	119557	49.06	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 98.12%		

Target Compounds					Qvalue
3) tertiary butyl alcohol	7.980	59	5891	10.83	ug/L 75
6) chlorodifluoromethane	4.194	51	7206	2.09	ug/L 97
7) dichlorodifluoromethane	4.162	85	8539	2.30	ug/L 81
10) chloromethane	4.502	50	9664	3.56	ug/L 98
11) vinyl chloride	4.801	62	9619	2.14	ug/L 99
13) bromomethane	5.507	94	5791	2.20	ug/L 95
14) chloroethane	5.716	64	5599	2.30	ug/L 95
15) vinyl bromide	6.082	106	4607	2.03	ug/L 98
16) trichlorofluoromethane	6.234	101	7625	2.18	ug/L 86
17) ethyl ether	6.673	74	1666	2.10	ug/L 89
18) acrolein	6.903	56	1569	2.49	ug/L 85
19) freon 113	7.097	151	3470	2.11	ug/L # 92
20) 1,1-dichloroethene	7.107	96	4261	2.05	ug/L 81
21) acetone	7.154	58	2741	8.02	ug/L 88
23) iodomethane	7.389	142	6059	1.97	ug/L 97
24) carbon disulfide	7.536	76	11700	1.97	ug/L 91
25) methylene chloride	7.860	84	4761	1.87	ug/L 94
26) methyl acetate	7.661	43	5640	2.24	ug/L # 84
27) methyl tert butyl ether	8.231	73	10080	1.96	ug/L 95
28) trans-1,2-dichloroethene	8.263	96	4090	1.92	ug/L 88
29) hexane	8.634	57	6322	2.03	ug/L 87
30) di-isopropyl ether	8.875	45	15821	1.98	ug/L 96
31) ethyl tert-butyl ether	9.372	59	14246	1.94	ug/L 97
32) 2-butanone	9.597	72	2422	7.15	ug/L # 72
33) 1,1-dichloroethane	8.859	63	8697	2.02	ug/L 98
34) chloroprene	8.985	53	6256	1.96	ug/L 92
35) acrylonitrile	8.200	53	1560	1.96	ug/L 84
37) ethyl acetate	9.623	45	859	1.98	ug/L # 1
38) 2,2-dichloropropane	9.649	77	8860	2.36	ug/L 93
39) cis-1,2-dichloroethene	9.623	96	4698	1.92	ug/L 96
41) propionitrile	9.696	54	10757	19.64	ug/L 89
42) bromochloromethane	9.931	128	3149	2.60	ug/L # 77
43) tetrahydrofuran	9.999	42	1990	2.15	ug/L 68
44) chloroform	9.994	83	7311	1.97	ug/L 97
45) tert-butyl formate	10.057	59	4643	2.01	ug/L 84
47) methacrylonitrile	9.879	67	1454	1.81	ug/L 90
48) cyclohexane	10.376	84	7328	2.08	ug/L 94
49) 1,1,1-trichloroethane	10.292	97	7192	2.09	ug/L 89
50) iso-butyl alcohol	10.444	43	5045	21.71	ug/L 93
51) 1,1-dichloropropene	10.470	75	5394	1.88	ug/L 91
52) carbon tetrachloride	10.507	117	5761	1.96	ug/L 98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240805.D
 Acq On : 3 Apr 2018 7:19 pm
 Operator : JessicaP
 Sample : ic9165-2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:16:51 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
53) tert-amyl alcohol	10.595	73	3121	10.64	ug/L	94
56) benzene	10.737	78	16941	2.00	ug/L	96
57) iso-octane	10.779	57	16001	1.92	ug/L	96
58) tert-amyl methyl ether	10.794	73	14696	2.03	ug/L	98
59) heptane	10.946	71	3484	2.19	ug/L	86
61) 1,2-dichloroethane	10.731	62	5330	1.92	ug/L	98
62) n-butyl alcohol	11.218	56	12838	98.11	ug/L	90
63) ethyl acrylate	11.474	55	5970	2.01	ug/L	98
64) trichloroethene	11.474	95	3771	1.97	ug/L	81
65) 2-nitropropane	12.274	41	1530	1.87	ug/L #	83
66) methylcyclohexane	11.736	83	8478	1.98	ug/L	91
67) 2-chloroethyl vinyl ether	12.301	63	11971	9.53	ug/L	98
69) 1,2-dichloropropane	11.746	63	4853	2.06	ug/L	92
70) dibromomethane	11.893	93	2604	2.02	ug/L #	80
71) bromodichloromethane	12.034	83	5133	1.95	ug/L	97
72) epichlorohydrin	12.416	57	3087	9.11	ug/L	89
73) cis-1,3-dichloropropene	12.525	75	6169	1.96	ug/L	97
74) 4-methyl-2-pentanone	12.651	58	9885	8.12	ug/L	99
75) 3-methyl-1-butanol	12.651	55	8569	37.91	ug/L	99
78) toluene	12.939	92	8875	2.01	ug/L	96
79) trans-1,3-dichloropropene	13.132	75	4901	1.97	ug/L	95
80) ethyl methacrylate	13.148	69	3590	2.05	ug/L	95
81) 1,1,2-trichloroethane	13.357	83	2670	1.99	ug/L	89
82) 2-hexanone	13.577	58	7788	8.15	ug/L	95
83) tetrachloroethene	13.582	166	3323	1.89	ug/L	88
84) 1,3-dichloropropane	13.566	76	5320	2.04	ug/L	94
87) dibromochloromethane	13.849	129	3531	1.91	ug/L	95
88) 1,2-dibromoethane	14.021	107	3107	1.96	ug/L	97
89) n-butyl ether	14.487	57	16913	2.01	ug/L	82
90) chlorobenzene	14.555	112	8580	1.98	ug/L	96
91) 1,1,1,2-tetrachloroethane	14.612	131	4206	2.01	ug/L	96
92) ethylbenzene	14.628	91	15268	1.98	ug/L	98
93) m,p-xylene	14.748	106	11320	3.88	ug/L	97
94) o-xylene	15.208	106	6381	1.95	ug/L	84
95) styrene	15.214	104	9548	2.00	ug/L	95
96) butyl acrylate	15.015	55	8442	2.07	ug/L	94
97) bromoform	15.486	173	2225	1.92	ug/L	95
98) isopropylbenzene	15.601	105	17447	1.98	ug/L	94
99) cis-1,4-dichloro-2-butene	15.648	75	1885	2.07	ug/L	90
102) bromobenzene	16.030	156	3842	1.94	ug/L	92
103) 1,1,2,2-tetrachloroethane	15.909	83	5571	1.94	ug/L	89
104) trans-1,4-dichloro-2-b...	15.962	53	800	1.93	ug/L #	78
105) 1,2,3-trichloropropane	15.998	110	1375	2.09	ug/L	91
106) n-propylbenzene	16.061	91	19434	1.94	ug/L	96
107) 2-chlorotoluene	16.213	126	3919	1.89	ug/L	91
108) 4-chlorotoluene	16.328	91	10676	1.99	ug/L	97
110) 1,3,5-trimethylbenzene	16.228	105	14320	1.83	ug/L	95
111) tert-butylbenzene	16.631	134	2646	1.71	ug/L #	92
112) 1,2,4-trimethylbenzene	16.673	105	13964	1.84	ug/L	97
113) sec-butylbenzene	16.866	105	18576	1.81	ug/L	98
114) 1,3-dichlorobenzene	17.060	146	7171	1.92	ug/L	85
115) p-isopropyltoluene	17.002	119	15692	1.84	ug/L	91
116) 1,4-dichlorobenzene	17.149	146	7281	1.89	ug/L	95
117) 1,2-dichlorobenzene	17.583	146	8016	1.94	ug/L	92
119) n-butylbenzene	17.463	92	8597	1.94	ug/L	97
121) 1,2-dibromo-3-chloropr...	18.430	157	1551	2.00	ug/L	86
122) 1,3,5-trichlorobenzene	18.655	180	7072	1.83	ug/L	97
123) 2-ethylhexyl acrylate	19.372	70	1246	0.42	ug/L #	59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240805.D
Acq On : 3 Apr 2018 7:19 pm
Operator : JessicaP
Sample : ic9165-2
Misc : MS25128,VA9165,5,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:16:51 2018
Response via : Initial Calibration

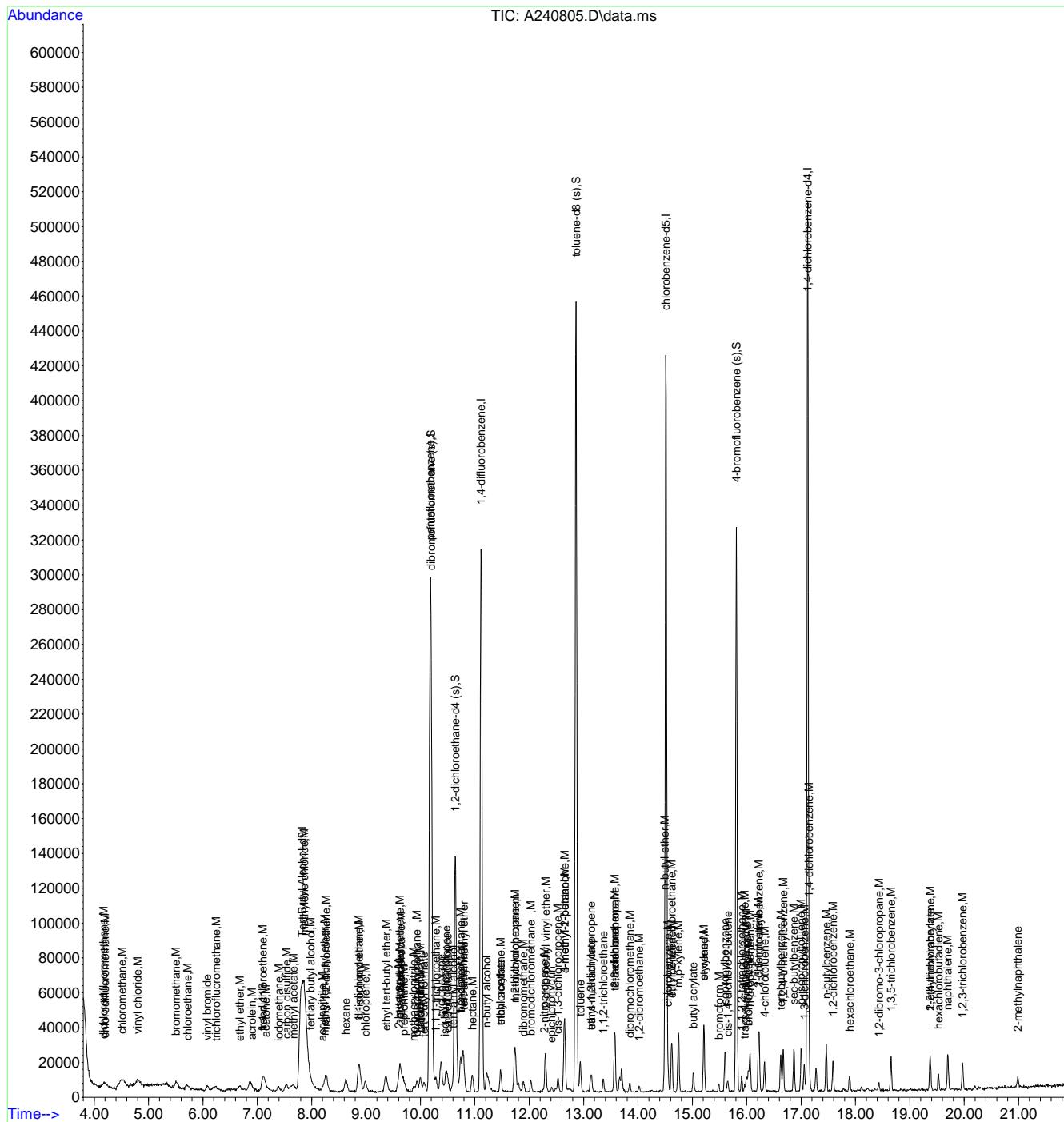
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
124) 1,2,4-trichlorobenzene	19.377	180	6330	1.88	ug/L	93
125) hexachlorobutadiene	19.523	225	2632	1.84	ug/L	92
126) naphthalene	19.696	128	18776	2.00	ug/L	98
127) 1,2,3-trichlorobenzene	19.968	180	5821	1.90	ug/L	99
128) hexachloroethane	17.897	201	1727	1.75	ug/L	97
129) 2-methylnaphthalene	20.988	142	3382	0.93	ug/L #	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240805.D
 Acq On : 3 Apr 2018 7:19 pm
 Operator : JessicaP
 Sample : ic9165-2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:16:51 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.860	65	352844	500.00	ug/L	0.05
5) pentafluorobenzene	10.183	168	239218	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	357986	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	275388	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	154792	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.204	113	120777	50.56	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 101.12%	
55) 1,2-dichloroethane-d4 (s)	10.643	65	127966	50.16	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 100.32%	
77) toluene-d8 (s)	12.860	98	371950	50.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 101.06%	
101) 4-bromofluorobenzene (s)	15.810	95	123424	48.84	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 97.68%	

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.981	59	15530	27.23	ug/L	88
4) 1,4-dioxane	11.877	88	5258	157.59	ug/L	91
6) chlorodifluoromethane	4.210	51	19097	5.30	ug/L	92
7) dichlorodifluoromethane	4.189	85	20339	5.25	ug/L	87
10) chloromethane	4.518	50	22411	7.91	ug/L	91
11) vinyl chloride	4.816	62	24119	5.14	ug/L	92
13) bromomethane	5.517	94	13796	5.02	ug/L	95
14) chloroethane	5.716	64	12796	5.04	ug/L	97
15) vinyl bromide	6.098	106	12220	5.16	ug/L	98
16) trichlorofluoromethane	6.229	101	18991	5.19	ug/L	87
17) ethyl ether	6.684	74	4478	5.40	ug/L	86
18) acrolein	6.919	56	3791	5.76	ug/L	93
19) freon 113	7.118	151	9543	5.55	ug/L	97
20) 1,1-dichloroethene	7.118	96	11854	5.47	ug/L	95
21) acetone	7.175	58	7218	20.22	ug/L	92
22) acetonitrile	7.615	41	31646	49.32	ug/L	94
23) iodomethane	7.395	142	15885	4.94	ug/L	96
24) carbon disulfide	7.541	76	30946	4.99	ug/L	96
25) methylene chloride	7.860	84	13424	5.06	ug/L	93
26) methyl acetate	7.672	43	14321	5.45	ug/L	93
27) methyl tert butyl ether	8.247	73	26187	4.88	ug/L	95
28) trans-1,2-dichloroethene	8.274	96	11663	5.25	ug/L	92
29) hexane	8.629	57	16148	4.96	ug/L	94
30) di-isopropyl ether	8.886	45	41683	4.98	ug/L	89
31) ethyl tert-butyl ether	9.372	59	38219	4.99	ug/L	98
32) 2-butanone	9.592	72	7639	21.59	ug/L	94
33) 1,1-dichloroethane	8.865	63	22222	4.93	ug/L	97
34) chloroprene	8.990	53	16897	5.06	ug/L	93
35) acrylonitrile	8.221	53	4912	5.90	ug/L	86
36) vinyl acetate	8.865	86	2172	5.74	ug/L #	71
37) ethyl acetate	9.618	45	2394	5.27	ug/L #	49
38) 2,2-dichloropropane	9.644	77	17916	4.57	ug/L	94
39) cis-1,2-dichloroethene	9.628	96	13118	5.14	ug/L	99
40) methyl acrylate	9.712	85	1480	5.27	ug/L #	30
41) propionitrile	9.681	54	27781	48.56	ug/L	83
42) bromochloromethane	9.937	128	7159	5.66	ug/L	90
43) tetrahydrofuran	10.005	42	5515	5.71	ug/L	86
44) chloroform	10.000	83	20069	5.18	ug/L	96
45) tert-butyl formate	10.062	59	12318	5.09	ug/L	96
47) methacrylonitrile	9.895	67	4270	5.09	ug/L #	68
48) cyclohexane	10.381	84	17962	4.88	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.292	97	18061	5.03	ug/L	98
50) iso-butyl alcohol	10.444	43	10499	43.25	ug/L	94
51) 1,1-dichloropropene	10.470	75	14900	4.98	ug/L	93
52) carbon tetrachloride	10.507	117	15043	4.89	ug/L	100
53) tert-amyl alcohol	10.606	73	8300	27.09	ug/L	89
56) benzene	10.742	78	45475	5.06	ug/L	98
57) iso-octane	10.784	57	43058	4.87	ug/L	96
58) tert-amyl methyl ether	10.795	73	38903	5.06	ug/L	97
59) heptane	10.957	71	8500	5.03	ug/L	94
60) isopropyl acetate	10.669	87	2669	4.14	ug/L #	78
61) 1,2-dichloroethane	10.737	62	14406	4.89	ug/L	98
62) n-butyl alcohol	11.218	56	34373	247.61	ug/L	97
63) ethyl acrylate	11.474	55	13789	4.38	ug/L	97
64) trichloroethene	11.469	95	10032	4.94	ug/L	90
65) 2-nitropropane	12.269	41	4172	4.80	ug/L #	78
66) methylcyclohexane	11.736	83	22447	4.95	ug/L	99
67) 2-chloroethyl vinyl ether	12.296	63	30865	23.17	ug/L	99
68) methyl methacrylate	11.757	100	2017	5.56	ug/L #	74
69) 1,2-dichloropropane	11.746	63	11923	4.76	ug/L	95
70) dibromomethane	11.893	93	6811	4.99	ug/L	98
71) bromodichloromethane	12.034	83	14016	5.02	ug/L	98
72) epichlorohydrin	12.416	57	8448	23.49	ug/L	96
73) cis-1,3-dichloropropene	12.531	75	16071	4.80	ug/L	92
74) 4-methyl-2-pentanone	12.651	58	25380	19.66	ug/L	95
75) 3-methyl-1-butanol	12.646	55	22868	95.36	ug/L	100
78) toluene	12.944	92	22588	4.93	ug/L	96
79) trans-1,3-dichloropropene	13.132	75	12610	4.88	ug/L	98
80) ethyl methacrylate	13.148	69	9149	5.02	ug/L	97
81) 1,1,2-trichloroethane	13.363	83	7294	5.22	ug/L	97
82) 2-hexanone	13.572	58	20445	20.57	ug/L	98
83) tetrachloroethene	13.582	166	9595	5.24	ug/L	86
84) 1,3-dichloropropane	13.567	76	13085	4.82	ug/L	99
85) butyl acetate	13.661	56	11481	4.37	ug/L	98
87) dibromochloromethane	13.849	129	9400	4.88	ug/L	97
88) 1,2-dibromoethane	14.027	107	8696	5.27	ug/L	92
89) n-butyl ether	14.487	57	44230	5.06	ug/L	95
90) chlorobenzene	14.550	112	22541	5.01	ug/L	98
91) 1,1,2-tetrachloroethane	14.613	131	11209	5.15	ug/L	90
92) ethylbenzene	14.623	91	39676	4.95	ug/L	95
93) m,p-xylene	14.743	106	30504	10.06	ug/L	100
94) o-xylene	15.209	106	17029	5.01	ug/L	94
95) styrene	15.214	104	24951	5.02	ug/L	97
96) butyl acrylate	15.020	55	21962	5.17	ug/L	97
97) bromoform	15.486	173	6361	5.28	ug/L	94
98) isopropylbenzene	15.601	105	45384	4.96	ug/L	96
99) cis-1,4-dichloro-2-butene	15.648	75	4922	5.21	ug/L	89
102) bromobenzene	16.030	156	9917	4.82	ug/L	93
103) 1,1,2,2-tetrachloroethane	15.904	83	14388	4.83	ug/L	95
104) trans-1,4-dichloro-2-b...	15.957	53	2264	5.26	ug/L #	78
105) 1,2,3-trichloropropane	15.993	110	3514	5.15	ug/L	83
106) n-propylbenzene	16.061	91	49277	4.75	ug/L	99
107) 2-chlorotoluene	16.218	126	10026	4.65	ug/L	97
108) 4-chlorotoluene	16.323	91	26560	4.77	ug/L	97
110) 1,3,5-trimethylbenzene	16.229	105	38661	4.77	ug/L	98
111) tert-butylbenzene	16.626	134	7295	4.53	ug/L	96
112) 1,2,4-trimethylbenzene	16.673	105	37416	4.75	ug/L	99
113) sec-butylbenzene	16.867	105	50516	4.74	ug/L	100
114) 1,3-dichlorobenzene	17.060	146	18837	4.85	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

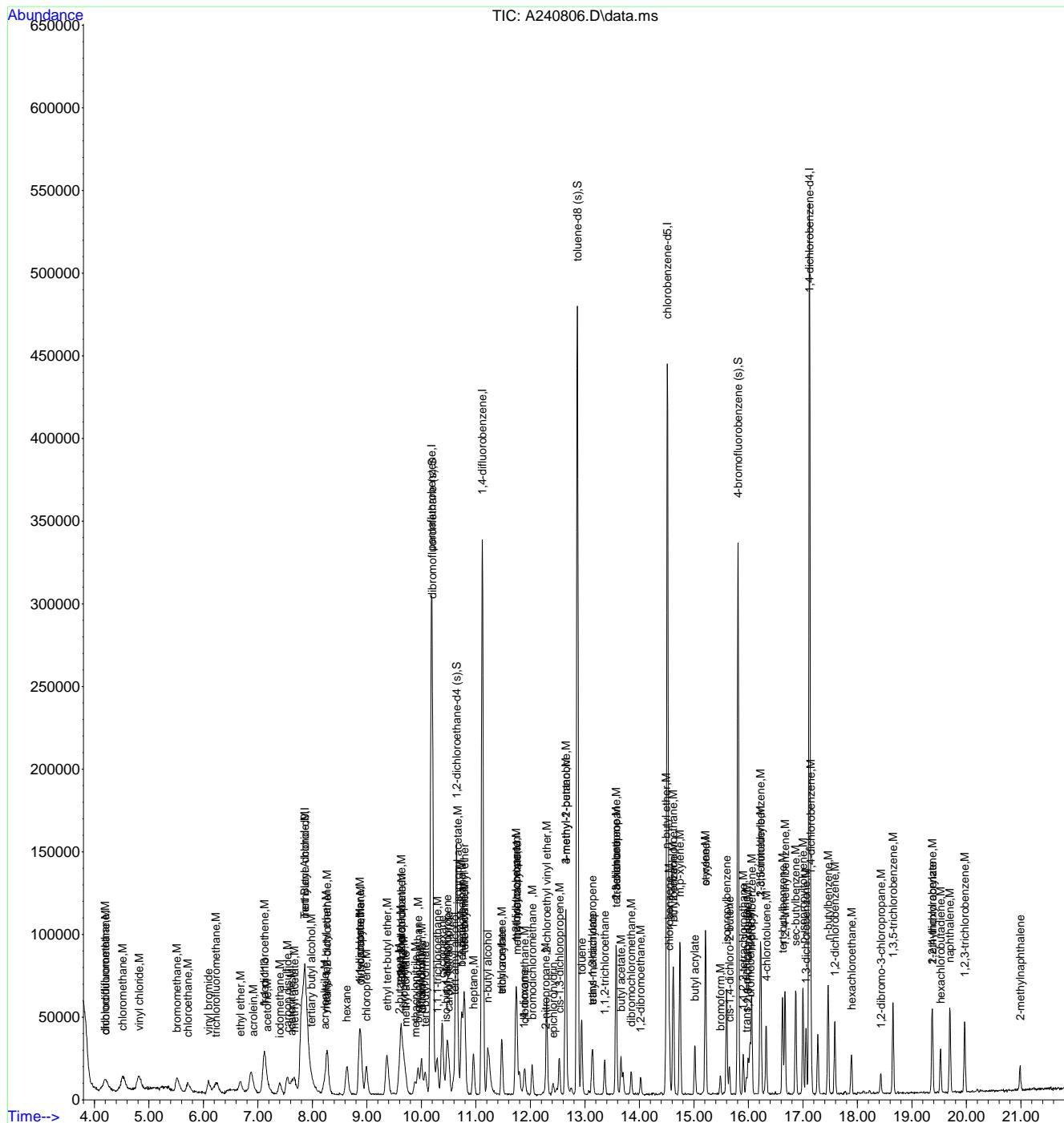
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.003	119	42124	4.77	ug/L	96
116) 1,4-dichlorobenzene	17.149	146	20148	5.04	ug/L	98
117) 1,2-dichlorobenzene	17.583	146	20355	4.75	ug/L	98
119) n-butylbenzene	17.463	92	22112	4.82	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.431	157	4190	5.21	ug/L	98
122) 1,3,5-trichlorobenzene	18.655	180	20199	5.03	ug/L	95
123) 2-ethylhexyl acrylate	19.367	70	2988	0.97	ug/L	96
124) 1,2,4-trichlorobenzene	19.377	180	17321	4.97	ug/L	98
125) hexachlorobutadiene	19.529	225	7254	4.90	ug/L	94
126) naphthalene	19.696	128	46863	4.83	ug/L	98
127) 1,2,3-trichlorobenzene	19.968	180	15566	4.89	ug/L	99
128) hexachloroethane	17.892	201	4666	4.57	ug/L	95
129) 2-methylnaphthalene	20.988	142	8555	2.28	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.821	65	346557	500.00	ug/L	0.01
5) pentafluorobenzene	10.180	168	242039	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	358831	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	266952	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	150789	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.201	113	120339	49.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.58%		
55) 1,2-dichloroethane-d4 (s)	10.640	65	130960	51.21	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	102.42%		
77) toluene-d8 (s)	12.863	98	373315	52.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	104.64%		
101) 4-bromofluorobenzene (s)	15.807	95	118221	48.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.06%		

Target Compounds					Qvalue
3) tertiary butyl alcohol	7.962	59	31977	57.08	ug/L 93
4) 1,4-dioxane	11.859	88	9177	280.04	ug/L 95
6) chlorodifluoromethane	4.186	51	38686	10.61	ug/L 94
7) dichlorodifluoromethane	4.191	85	41986	10.70	ug/L 96
10) chloromethane	4.510	50	43435	15.15	ug/L 96
11) vinyl chloride	4.819	62	47335	9.97	ug/L 96
13) bromomethane	5.514	94	26814	9.65	ug/L 97
14) chloroethane	5.708	64	23942	9.31	ug/L 96
15) vinyl bromide	6.095	106	24869	10.38	ug/L 99
16) trichlorofluoromethane	6.247	101	38366	10.36	ug/L 97
17) ethyl ether	6.676	74	9560	11.39	ug/L 91
18) acrolein	6.911	56	7147	10.74	ug/L 94
19) freon 113	7.104	151	19816	11.39	ug/L 100
20) 1,1-dichloroethene	7.110	96	23118	10.54	ug/L 95
21) acetone	7.162	58	16306	45.15	ug/L 91
22) acetonitrile	7.627	41	60295	92.87	ug/L 97
23) iodomethane	7.397	142	31816	9.77	ug/L 92
24) carbon disulfide	7.533	76	60451	9.63	ug/L 99
25) methylene chloride	7.852	84	25683	9.56	ug/L 96
26) methyl acetate	7.669	43	27751	10.44	ug/L 99
27) methyl tert butyl ether	8.245	73	54215	9.98	ug/L 99
28) trans-1,2-dichloroethene	8.271	96	23345	10.38	ug/L 96
29) hexane	8.632	57	32616	9.89	ug/L 97
30) di-isopropyl ether	8.883	45	84870	10.03	ug/L 93
31) ethyl tert-butyl ether	9.369	59	80738	10.41	ug/L 98
32) 2-butanone	9.594	72	15914	44.46	ug/L 96
33) 1,1-dichloroethane	8.862	63	45209	9.91	ug/L 95
34) chloroprene	8.992	53	34873	10.32	ug/L 98
35) acrylonitrile	8.203	53	9898	11.75	ug/L 86
36) vinyl acetate	8.851	86	4394	11.47	ug/L # 54
37) ethyl acetate	9.610	45	4867	10.60	ug/L # 49
38) 2,2-dichloropropane	9.646	77	36999	9.33	ug/L 95
39) cis-1,2-dichloroethene	9.625	96	26511	10.26	ug/L 97
40) methyl acrylate	9.688	85	2923	10.29	ug/L # 73
41) propionitrile	9.683	54	58568	101.17	ug/L 99
42) bromochloromethane	9.934	128	13605	10.63	ug/L 95
43) tetrahydrofuran	9.986	42	10365	10.61	ug/L 97
44) chloroform	10.002	83	39285	10.01	ug/L 98
45) tert-butyl formate	10.065	59	24916	10.19	ug/L 98
47) methacrylonitrile	9.876	67	8794	10.36	ug/L 94
48) cyclohexane	10.378	84	37785	10.14	ug/L 98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.290	97	36164	9.96	ug/L	97
50) iso-butyl alcohol	10.441	43	22278	90.70	ug/L	95
51) 1,1-dichloropropene	10.473	75	30447	10.06	ug/L	96
52) carbon tetrachloride	10.499	117	30854	9.91	ug/L	99
53) tert-amyl alcohol	10.598	73	16839	54.32	ug/L	94
56) benzene	10.739	78	91759	10.19	ug/L	99
57) iso-octane	10.781	57	88215	9.96	ug/L	99
58) tert-amyl methyl ether	10.792	73	78852	10.23	ug/L	97
59) heptane	10.949	71	17450	10.30	ug/L	96
60) isopropyl acetate	10.671	87	5595	8.65	ug/L #	86
61) 1,2-dichloroethane	10.734	62	28905	9.79	ug/L	97
62) n-butyl alcohol	11.215	56	70642	507.69	ug/L	97
63) ethyl acrylate	11.477	55	29395	9.32	ug/L	99
64) trichloroethene	11.472	95	21378	10.51	ug/L	95
65) 2-nitropropane	12.261	41	7830	8.99	ug/L #	56
66) methylcyclohexane	11.733	83	46850	10.30	ug/L	98
67) 2-chloroethyl vinyl ether	12.298	63	65137	48.79	ug/L	98
68) methyl methacrylate	11.754	100	4138	11.38	ug/L #	85
69) 1,2-dichloropropane	11.749	63	23676	9.43	ug/L	99
70) dibromomethane	11.895	93	13949	10.19	ug/L	100
71) bromodichloromethane	12.031	83	28561	10.20	ug/L	96
72) epichlorohydrin	12.413	57	16765	46.51	ug/L	97
73) cis-1,3-dichloropropene	12.528	75	33385	9.95	ug/L	99
74) 4-methyl-2-pentanone	12.648	58	51691	39.94	ug/L	96
75) 3-methyl-1-butanol	12.648	55	46763	194.54	ug/L	98
78) toluene	12.941	92	47508	10.69	ug/L	100
79) trans-1,3-dichloropropene	13.130	75	26418	10.55	ug/L	96
80) ethyl methacrylate	13.145	69	19443	11.00	ug/L	92
81) 1,1,2-trichloroethane	13.360	83	14743	10.88	ug/L	98
82) 2-hexanone	13.569	58	42763	44.39	ug/L	96
83) tetrachloroethene	13.579	166	19445	10.95	ug/L	96
84) 1,3-dichloropropane	13.564	76	26118	9.93	ug/L	99
85) butyl acetate	13.658	56	18783	7.37	ug/L	94
87) dibromochloromethane	13.851	129	19020	10.19	ug/L	97
88) 1,2-dibromoethane	14.024	107	17294	10.81	ug/L	97
89) n-butyl ether	14.489	57	87765	10.36	ug/L	98
90) chlorobenzene	14.552	112	44425	10.18	ug/L	97
91) 1,1,2-tetrachloroethane	14.615	131	22884	10.84	ug/L	98
92) ethylbenzene	14.625	91	80539	10.36	ug/L	98
93) m,p-xylene	14.746	106	62773	21.36	ug/L	99
94) o-xylene	15.211	106	35097	10.66	ug/L	100
95) styrene	15.216	104	49296	10.23	ug/L	98
96) butyl acrylate	15.018	55	43397	10.53	ug/L	99
97) bromoform	15.488	173	12503	10.71	ug/L	97
98) isopropylbenzene	15.603	105	98206	11.06	ug/L	97
99) cis-1,4-dichloro-2-butene	15.650	75	10120	11.05	ug/L	98
102) bromobenzene	16.032	156	19411	9.69	ug/L	91
103) 1,1,2,2-tetrachloroethane	15.907	83	29028	10.00	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	4018	9.59	ug/L	100
105) 1,2,3-trichloropropane	15.990	110	7035	10.58	ug/L	93
106) n-propylbenzene	16.058	91	102906	10.19	ug/L	95
107) 2-chlorotoluene	16.215	126	20954	9.98	ug/L	89
108) 4-chlorotoluene	16.325	91	54369	10.03	ug/L	98
110) 1,3,5-trimethylbenzene	16.231	105	79676	10.10	ug/L	99
111) tert-butylbenzene	16.628	134	16172	10.32	ug/L	94
112) 1,2,4-trimethylbenzene	16.670	105	78109	10.17	ug/L	98
113) sec-butylbenzene	16.869	105	106532	10.27	ug/L	99
114) 1,3-dichlorobenzene	17.057	146	38749	10.25	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

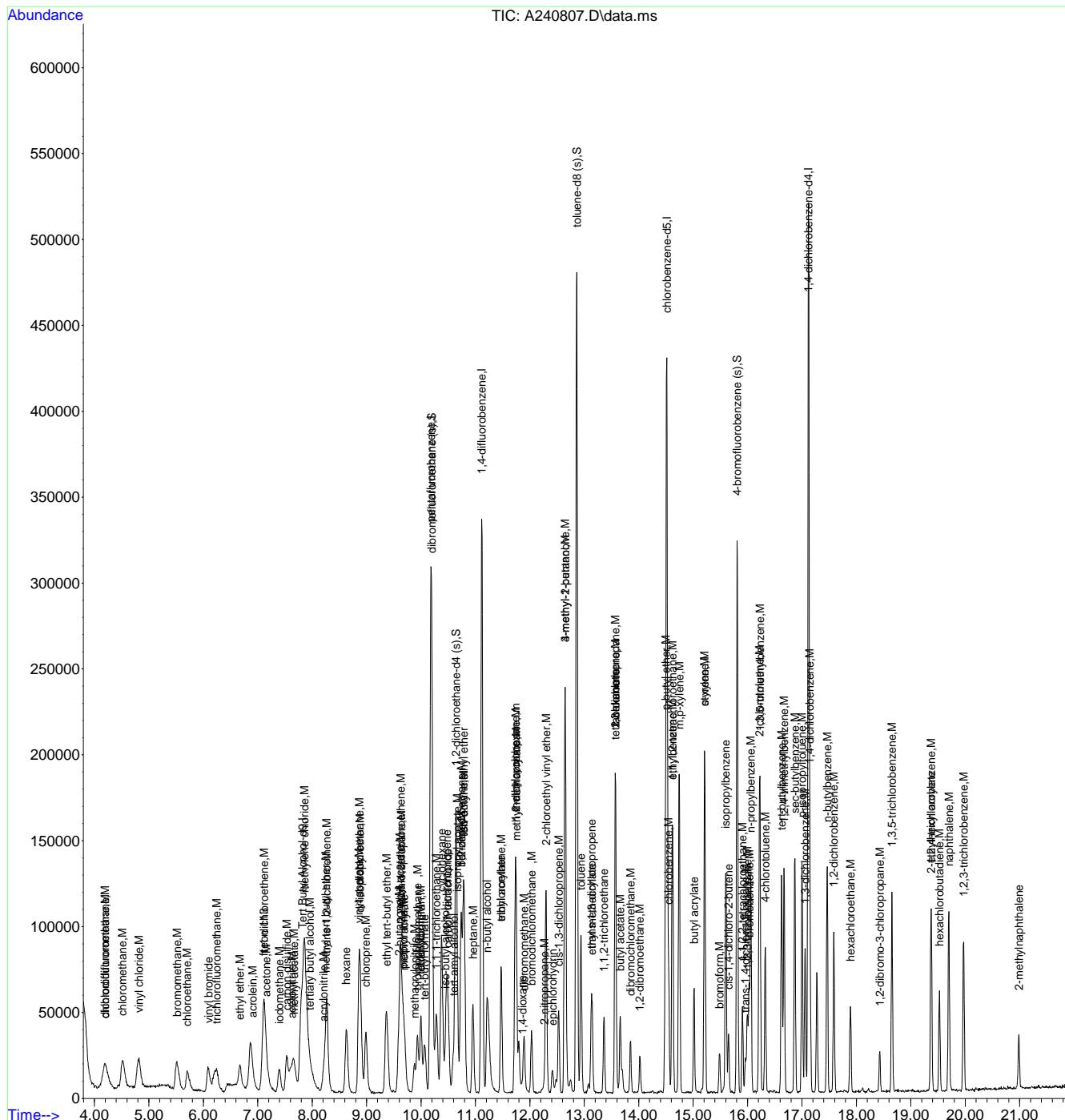
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	88645	10.30	ug/L	99
116) 1,4-dichlorobenzene	17.146	146	39566	10.16	ug/L	97
117) 1,2-dichlorobenzene	17.586	146	42875	10.26	ug/L	97
119) n-butylbenzene	17.465	92	45792	10.25	ug/L	99
121) 1,2-dibromo-3-chloropr...	18.428	157	8292	10.58	ug/L	94
122) 1,3,5-trichlorobenzene	18.653	180	41177	10.53	ug/L	99
123) 2-ethylhexyl acrylate	19.364	70	6514	2.17	ug/L	96
124) 1,2,4-trichlorobenzene	19.374	180	36606	10.79	ug/L	98
125) hexachlorobutadiene	19.526	225	15008	10.41	ug/L	98
126) naphthalene	19.699	128	95507	10.10	ug/L	100
127) 1,2,3-trichlorobenzene	19.971	180	32516	10.49	ug/L	94
128) hexachloroethane	17.889	201	10514	10.58	ug/L	97
129) 2-methylnaphthalene	20.985	142	18026	4.93	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240807.D
Acq On : 3 Apr 2018 8:17 pm
Operator : JessicaP
Sample : ic9165-10
Misc : MS25128,VA9165,5,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:21:09 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.813	65	349678	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	241916	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	366081	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	287596	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	156192	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.204	113	120506	49.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.76%			
55) 1,2-dichloroethane-d4 (s)	10.643	65	133865	51.31	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 102.62%			
77) toluene-d8 (s)	12.861	98	390360	50.78	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 101.56%			
101) 4-bromofluorobenzene (s)	15.810	95	126146	49.47	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.94%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.976	59	62902	111.28	ug/L	95
4) 1,4-dioxane	11.856	88	18246	551.81	ug/L	98
6) chlorodifluoromethane	4.189	51	74780	20.52	ug/L	98
7) dichlorodifluoromethane	4.205	85	82438	21.03	ug/L	96
10) chloromethane	4.518	50	85314	29.78	ug/L	98
11) vinyl chloride	4.806	62	94959	20.01	ug/L	100
13) bromomethane	5.512	94	52552	18.92	ug/L	96
14) chloroethane	5.700	64	45755	17.81	ug/L	95
15) vinyl bromide	6.093	106	49588	20.70	ug/L	99
16) trichlorofluoromethane	6.229	101	76439	20.65	ug/L	98
17) ethyl ether	6.673	74	18307	21.83	ug/L	80
18) acrolein	6.909	56	14680	22.07	ug/L	95
19) freon 113	7.113	151	38286	22.02	ug/L	100
20) 1,1-dichloroethene	7.113	96	44890	20.47	ug/L	97
21) acetone	7.170	58	30007	83.12	ug/L	97
22) acetonitrile	7.604	41	117520	181.10	ug/L	96
23) iodomethane	7.395	142	61759	18.98	ug/L	96
24) carbon disulfide	7.536	76	116645	18.59	ug/L	97
25) methylene chloride	7.855	84	51641	19.24	ug/L	96
26) methyl acetate	7.662	43	51589	19.41	ug/L	99
27) methyl tert butyl ether	8.242	73	108937	20.06	ug/L	100
28) trans-1,2-dichloroethene	8.263	96	45396	20.20	ug/L	97
29) hexane	8.635	57	61997	18.81	ug/L	99
30) di-isopropyl ether	8.880	45	168490	19.92	ug/L	98
31) ethyl tert-butyl ether	9.362	59	156864	20.23	ug/L	98
32) 2-butanone	9.586	72	31347	87.62	ug/L	99
33) 1,1-dichloroethane	8.859	63	86808	19.04	ug/L	100
34) chloroprene	8.985	53	69109	20.47	ug/L	97
35) acrylonitrile	8.206	53	19201	22.80	ug/L	89
36) vinyl acetate	8.854	86	8988	23.48	ug/L	98
37) ethyl acetate	9.613	45	9755	21.25	ug/L #	53
38) 2,2-dichloropropane	9.649	77	71042	17.92	ug/L	93
39) cis-1,2-dichloroethene	9.623	96	51471	19.93	ug/L	98
40) methyl acrylate	9.707	85	6560	23.10	ug/L #	61
41) propionitrile	9.686	54	117119	202.42	ug/L	95
42) bromochloromethane	9.937	128	26650	20.83	ug/L	98
43) tetrahydrofuran	10.000	42	20214	20.70	ug/L	95
44) chloroform	10.000	83	78662	20.06	ug/L	99
45) tert-butyl formate	10.068	59	50649	20.72	ug/L	99
47) methacrylonitrile	9.879	67	17499	20.62	ug/L	94
48) cyclohexane	10.381	84	74778	20.08	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.287	97	71690	19.76	ug/L	98
50) iso-butyl alcohol	10.455	43	44264	180.31	ug/L	92
51) 1,1-dichloropropene	10.470	75	59934	19.82	ug/L	99
52) carbon tetrachloride	10.502	117	62900	20.20	ug/L	99
53) tert-amyl alcohol	10.601	73	32486	104.85	ug/L	95
56) benzene	10.737	78	181257	19.74	ug/L	98
57) iso-octane	10.784	57	174817	19.35	ug/L	99
58) tert-amyl methyl ether	10.795	73	156800	19.95	ug/L	99
59) heptane	10.957	71	33882	19.61	ug/L	98
60) isopropyl acetate	10.664	87	11641	17.64	ug/L #	89
61) 1,2-dichloroethane	10.732	62	56647	18.80	ug/L	96
62) n-butyl alcohol	11.218	56	137432	968.13	ug/L	98
63) ethyl acrylate	11.475	55	60546	18.83	ug/L	99
64) trichloroethene	11.469	95	41989	20.24	ug/L	94
65) 2-nitropropane	12.264	41	14462	16.27	ug/L #	61
66) methylcyclohexane	11.736	83	91566	19.73	ug/L	99
67) 2-chloroethyl vinyl ether	12.296	63	130596	95.88	ug/L	98
68) methyl methacrylate	11.757	100	8629	23.26	ug/L #	82
69) 1,2-dichloropropane	11.746	63	47079	18.38	ug/L	98
70) dibromomethane	11.893	93	27841	19.94	ug/L	98
71) bromodichloromethane	12.034	83	57419	20.09	ug/L	97
72) epichlorohydrin	12.416	57	33560	91.27	ug/L	98
73) cis-1,3-dichloropropene	12.531	75	65478	19.13	ug/L	98
74) 4-methyl-2-pentanone	12.651	58	104435	79.09	ug/L	97
75) 3-methyl-1-butanol	12.646	55	92143	375.74	ug/L	99
78) toluene	12.939	92	95194	19.89	ug/L	98
79) trans-1,3-dichloropropene	13.127	75	54397	20.16	ug/L	96
80) ethyl methacrylate	13.148	69	39120	20.55	ug/L	96
81) 1,1,2-trichloroethane	13.363	83	29662	20.32	ug/L	96
82) 2-hexanone	13.572	58	83886	80.82	ug/L	98
83) tetrachloroethene	13.577	166	39148	20.46	ug/L	96
84) 1,3-dichloropropane	13.567	76	55284	19.52	ug/L	96
85) butyl acetate	13.661	56	34879	12.71	ug/L	98
87) dibromochloromethane	13.849	129	37509	18.66	ug/L	94
88) 1,2-dibromoethane	14.022	107	35203	20.43	ug/L	98
89) n-butyl ether	14.487	57	186279	20.41	ug/L	99
90) chlorobenzene	14.550	112	92779	19.73	ug/L	98
91) 1,1,2-tetrachloroethane	14.618	131	47031	20.68	ug/L	96
92) ethylbenzene	14.623	91	169620	20.26	ug/L	100
93) m,p-xylene	14.743	106	129043	40.75	ug/L	98
94) o-xylene	15.209	106	74059	20.87	ug/L	94
95) styrene	15.214	104	103055	19.85	ug/L	100
96) butyl acrylate	15.015	55	87038	19.61	ug/L	98
97) bromoform	15.486	173	26372	20.97	ug/L	99
98) isopropylbenzene	15.601	105	201938	21.12	ug/L	98
99) cis-1,4-dichloro-2-butene	15.648	75	19912	20.17	ug/L	95
102) bromobenzene	16.025	156	40973	19.74	ug/L	97
103) 1,1,2,2-tetrachloroethane	15.904	83	60227	20.02	ug/L	97
104) trans-1,4-dichloro-2-b...	15.962	53	8302	19.13	ug/L	95
105) 1,2,3-trichloropropane	15.993	110	14309	20.77	ug/L	95
106) n-propylbenzene	16.061	91	210507	20.12	ug/L	99
107) 2-chlorotoluene	16.213	126	44207	20.33	ug/L	100
108) 4-chlorotoluene	16.323	91	110986	19.76	ug/L	98
110) 1,3,5-trimethylbenzene	16.229	105	164634	20.15	ug/L	99
111) tert-butylbenzene	16.626	134	34494	21.25	ug/L	93
112) 1,2,4-trimethylbenzene	16.673	105	162775	20.46	ug/L	100
113) sec-butylbenzene	16.867	105	224782	20.92	ug/L	99
114) 1,3-dichlorobenzene	17.060	146	80049	20.44	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.003	119	183615	20.59	ug/L	99
116) 1,4-dichlorobenzene	17.149	146	80537	19.97	ug/L	99
117) 1,2-dichlorobenzene	17.589	146	86374	19.96	ug/L	97
119) n-butylbenzene	17.463	92	95475	20.64	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.431	157	16162	19.91	ug/L	96
122) 1,3,5-trichlorobenzene	18.656	180	82024	20.25	ug/L	99
123) 2-ethylhexyl acrylate	19.362	70	12292	3.95	ug/L	97
124) 1,2,4-trichlorobenzene	19.377	180	71983	20.48	ug/L	97
125) hexachlorobutadiene	19.524	225	30567	20.48	ug/L	95
126) naphthalene	19.696	128	182627	18.64	ug/L	100
127) 1,2,3-trichlorobenzene	19.968	180	65187	20.30	ug/L	97
128) hexachloroethane	17.892	201	21621	21.00	ug/L	96
129) 2-methylnaphthalene	20.983	142	35730	9.43	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

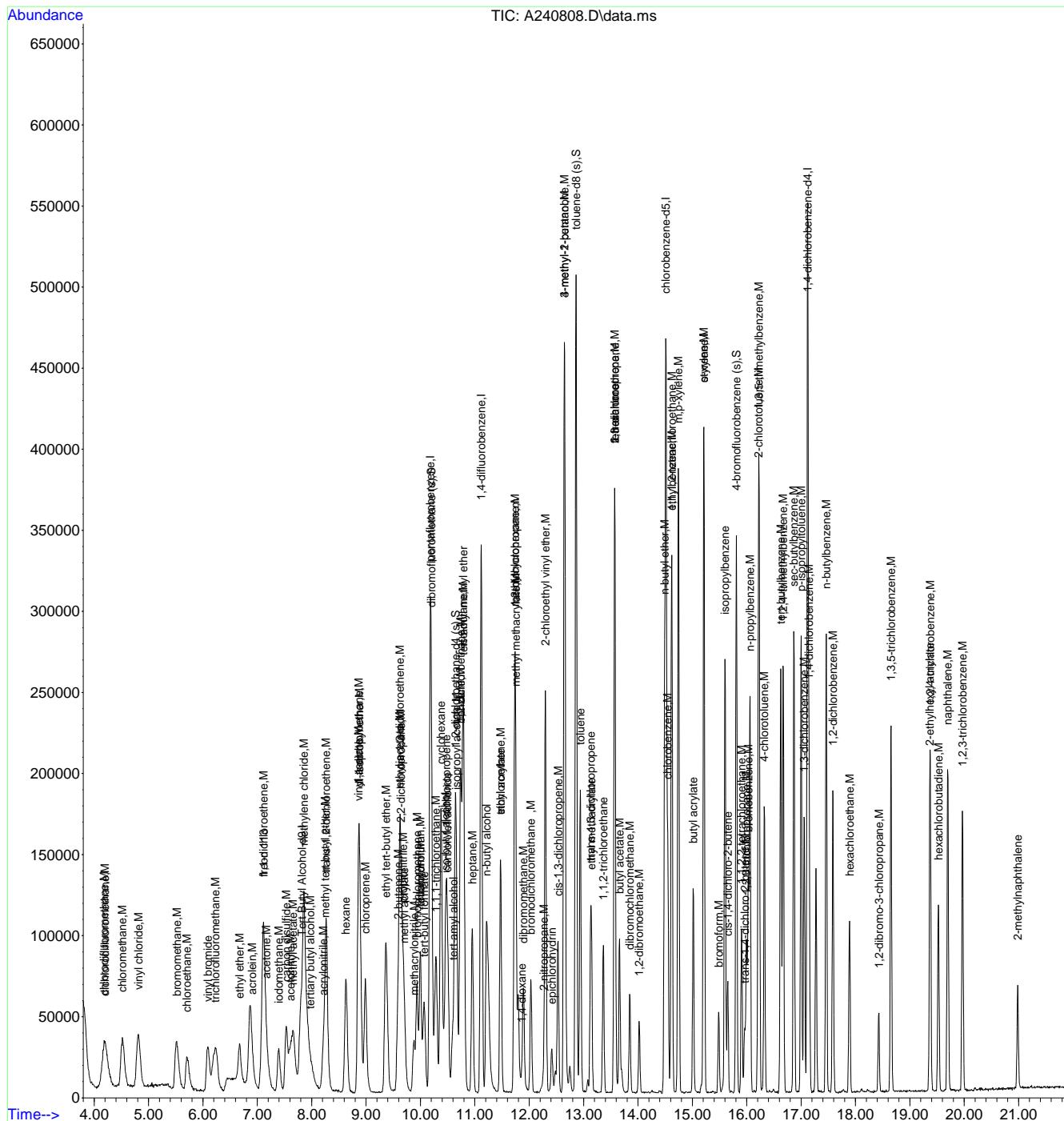
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7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240808.D
Acq On : 3 Apr 2018 8:46 pm
Operator : JessicaP
Sample : ic9165-20
Misc : MS25128,VA9165,5,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:00:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	357008	500.00	ug/L	0.00
5) pentafluorobenzene	10.179	168	243372	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.115	114	377674	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	314675	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.119	152	153458	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.200	113	120595	44.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	88.78%		
55) 1,2-dichloroethane-d4 (s)	10.644	65	133037	39.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	78.00%#		
77) toluene-d8 (s)	12.862	98	419154	49.39	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	98.78%		
101) 4-bromofluorobenzene (s)	15.806	95	127993	46.36	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	92.72%		

Target Compounds					Qvalue	
3) tertiary butyl alcohol	7.940	59	156024	199.21	ug/L	95
4) 1,4-dioxane	11.858	88	49510	1114.96	ug/L	91
6) chlorodifluoromethane	4.185	51	183842	23.38	ug/L	99
7) dichlorodifluoromethane	4.180	85	210993	30.45	ug/L	98
10) chloromethane	4.525	50	221383	23.28	ug/L	98
11) vinyl chloride	4.818	62	243230	29.68	ug/L	98
13) bromomethane	5.513	94	131537	28.03	ug/L	99
14) chloroethane	5.702	64	110939	28.21	ug/L	94
15) vinyl bromide	6.089	106	124459	29.75	ug/L	99
16) trichlorofluoromethane	6.225	101	192185	29.74	ug/L	97
17) ethyl ether	6.675	74	43430	29.66	ug/L	91
18) acrolein	6.905	56	34328	41.41	ug/L	88
19) freon 113	7.103	151	93663	36.52	ug/L	90
20) 1,1-dichloroethene	7.103	96	107296	37.97	ug/L	87
21) acetone	7.151	58	73275	157.75	ug/L #	74
22) acetonitrile	7.600	41	284108	284.28	ug/L	98
23) iodomethane	7.391	142	149535	29.17	ug/L	94
24) carbon disulfide	7.527	76	276654	23.33	ug/L	97
25) methylene chloride	7.851	84	123491	38.61	ug/L	87
26) methyl acetate	7.658	43	128822	36.06	ug/L	94
27) methyl tert butyl ether	8.244	73	270037	25.15	ug/L	98
28) trans-1,2-dichloroethene	8.265	96	106776	41.63	ug/L	85
29) hexane	8.625	57	150520	38.02	ug/L	96
30) di-isopropyl ether	8.876	45	410457	33.21	ug/L	78
31) ethyl tert-butyl ether	9.363	59	395104	35.41	ug/L	96
32) 2-butanone	9.583	72	81135	184.96	ug/L #	74
33) 1,1-dichloroethane	8.861	63	204800	39.53	ug/L	97
34) chloroprene	8.986	53	163260	36.30	ug/L	92
35) acrylonitrile	8.197	53	46686	27.80	ug/L	93
36) vinyl acetate	8.856	86	23185	58.95	ug/L #	65
37) ethyl acetate	9.619	45	25544	39.66	ug/L #	56
38) 2,2-dichloropropane	9.651	77	169495	33.79	ug/L	92
39) cis-1,2-dichloroethene	9.619	96	123634	43.48	ug/L	90
40) methyl acrylate	9.703	85	15842	34.62	ug/L #	77
41) propionitrile	9.682	54	298933	351.77	ug/L	99
42) bromochloromethane	9.933	128	62976	48.31	ug/L	87
43) tetrahydrofuran	9.990	42	50053	25.18	ug/L	88
44) chloroform	10.001	83	187090	38.42	ug/L	98
45) tert-butyl formate	10.064	59	122957	43.17	ug/L	93
47) methacrylonitrile	9.875	67	44160	30.18	ug/L	85
48) cyclohexane	10.383	84	180845	35.52	ug/L #	73

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.289	97	175098	35.62	ug/L	98
50) iso-butyl alcohol	10.451	43	107730	311.14	ug/L	97
51) 1,1-dichloropropene	10.466	75	148987	41.70	ug/L	97
52) carbon tetrachloride	10.503	117	151109	37.05	ug/L	98
53) tert-amyl alcohol	10.597	73	84059	176.50	ug/L	87
56) benzene	10.738	78	447048	42.53	ug/L	97
57) iso-octane	10.785	57	443668	34.20	ug/L	94
58) tert-amyl methyl ether	10.796	73	388390	37.11	ug/L	96
59) heptane	10.953	71	83989	40.14	ug/L	98
60) isopropyl acetate	10.670	87	30138	48.83	ug/L #	58
61) 1,2-dichloroethane	10.733	62	140384	37.55	ug/L	97
62) n-butyl alcohol	11.220	56	367750	1967.75	ug/L	93
63) ethyl acrylate	11.476	55	157908	42.87	ug/L	98
64) trichloroethene	11.471	95	103831	42.05	ug/L	89
65) 2-nitropropane	12.271	41	39904	30.00	ug/L #	64
66) methylcyclohexane	11.732	83	222589	38.05	ug/L	92
67) 2-chloroethyl vinyl ether	12.297	63	350795	261.62	ug/L	96
68) methyl methacrylate	11.753	100	22718	34.16	ug/L #	74
69) 1,2-dichloropropane	11.748	63	117800	41.15	ug/L	97
70) dibromomethane	11.894	93	71901	46.42	ug/L	88
71) bromodichloromethane	12.030	83	145131	43.25	ug/L	97
72) epichlorohydrin	12.412	57	88464	201.48	ug/L	97
73) cis-1,3-dichloropropene	12.532	75	174185	44.97	ug/L	92
74) 4-methyl-2-pentanone	12.647	58	271405	160.82	ug/L #	83
75) 3-methyl-1-butanol	12.647	55	240625	776.00	ug/L	93
78) toluene	12.940	92	249056	46.91	ug/L	97
79) trans-1,3-dichloropropene	13.129	75	145526	45.93	ug/L	97
80) ethyl methacrylate	13.149	69	102090	30.36	ug/L	90
81) 1,1,2-trichloroethane	13.364	83	78382	47.55	ug/L	94
82) 2-hexanone	13.573	58	217635	165.19	ug/L #	87
83) tetrachloroethene	13.578	166	102780	51.09	ug/L	96
84) 1,3-dichloropropane	13.568	76	149443	45.72	ug/L	99
85) butyl acetate	13.662	56	82616	40.27	ug/L	87
87) dibromochloromethane	13.850	129	102929	51.09	ug/L	100
88) 1,2-dibromoethane	14.023	107	94184	46.61	ug/L	99
89) n-butyl ether	14.488	57	465109	38.28	ug/L	95
90) chlorobenzene	14.551	112	252896	46.56	ug/L	93
91) 1,1,2-tetrachloroethane	14.614	131	120034	48.88	ug/L	98
92) ethylbenzene	14.624	91	434029	41.01	ug/L	97
93) m,p-xylene	14.745	106	336818	88.15	ug/L	92
94) o-xylene	15.210	106	187395	45.31	ug/L	93
95) styrene	15.215	104	261516	41.48	ug/L	96
96) butyl acrylate	15.017	55	209130	36.79	ug/L	96
97) bromoform	15.487	173	67736	46.80	ug/L	99
98) isopropylbenzene	15.602	105	513398	43.46	ug/L	97
99) cis-1,4-dichloro-2-butene	15.649	75	48942	40.85	ug/L	92
102) bromobenzene	16.031	156	100162	49.27	ug/L	86
103) 1,1,2,2-tetrachloroethane	15.906	83	150509	46.76	ug/L	98
104) trans-1,4-dichloro-2-b...	15.958	53	19785	26.62	ug/L	83
105) 1,2,3-trichloropropane	15.995	110	35267	45.39	ug/L	98
106) n-propylbenzene	16.063	91	520479	44.06	ug/L	96
107) 2-chlorotoluene	16.214	126	111453	51.16	ug/L #	85
108) 4-chlorotoluene	16.324	91	269152	41.97	ug/L	96
110) 1,3,5-trimethylbenzene	16.230	105	423285	48.45	ug/L	98
111) tert-butylbenzene	16.628	134	91390	54.55	ug/L #	91
112) 1,2,4-trimethylbenzene	16.669	105	403877	46.51	ug/L	96
113) sec-butylbenzene	16.868	105	570200	48.82	ug/L	98
114) 1,3-dichlorobenzene	17.056	146	193371	47.16	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.004	119	461578	48.15	ug/L	96
116) 1,4-dichlorobenzene	17.151	146	194208	47.23	ug/L	97
117) 1,2-dichlorobenzene	17.585	146	208414	47.49	ug/L	99
119) n-butylbenzene	17.464	92	223007	43.45	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.432	157	39540	43.91	ug/L	91
122) 1,3,5-trichlorobenzene	18.652	180	199437	49.37	ug/L	98
123) 2-ethylhexyl acrylate	19.363	70	30207	9.14	ug/L	89
124) 1,2,4-trichlorobenzene	19.373	180	172327	44.77	ug/L	98
125) hexachlorobutadiene	19.525	225	77194	44.87	ug/L	96
126) naphthalene	19.698	128	434761	36.03	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	158568	38.73	ug/L	97
128) hexachloroethane	17.893	201	59629	42.10	ug/L	95
129) 2-methylnaphthalene	20.984	142	83961	10.48	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

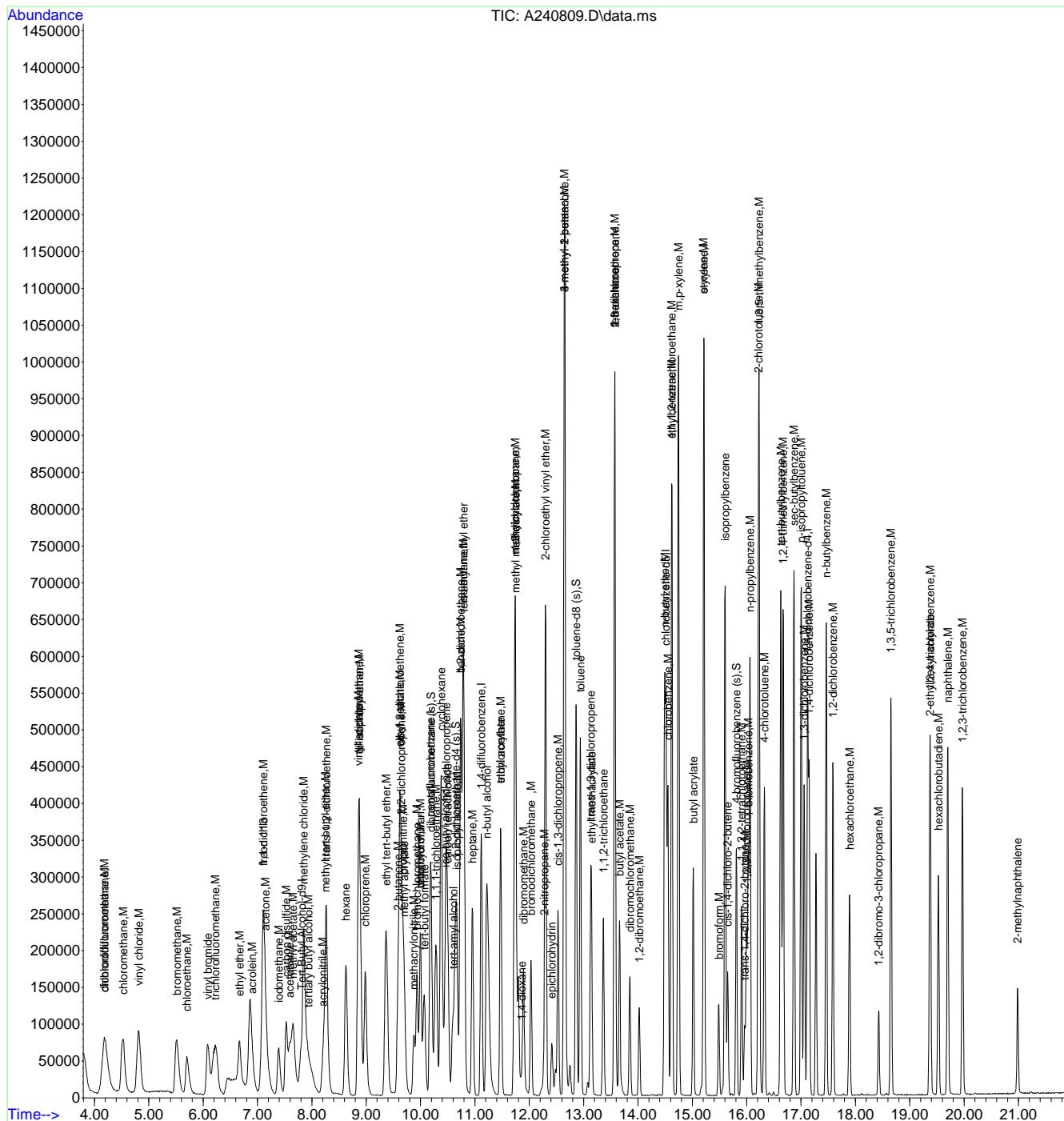
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240809.D
Acq On : 3 Apr 2018 9:15 pm
Operator : JessicaP
Sample : icc9165-50
Misc : MS25128,VA9165,5,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update: Mon Mar 19 16:31:00 2018
Response via: Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.816	65	365289	500.00	ug/L	0.00
5) pentafluorobenzene	10.185	168	261659	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.121	114	410003	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	355943	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	166016	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.201	113	129534	49.57	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	99.14%		
55) 1,2-dichloroethane-d4 (s)	10.645	65	141899	48.56	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery =	97.12%		
77) toluene-d8 (s)	12.863	98	457261	48.06	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	96.12%		
101) 4-bromofluorobenzene (s)	15.813	95	144167	53.20	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	106.40%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.973	59	324075	548.84	ug/L	97
4) 1,4-dioxane	11.859	88	104372	3021.60	ug/L	99
6) chlorodifluoromethane	4.191	51	386345	98.01	ug/L	98
7) dichlorodifluoromethane	4.191	85	419374	98.89	ug/L	100
10) chloromethane	4.547	50	477329	154.05	ug/L	98
11) vinyl chloride	4.840	62	514402	100.23	ug/L	97
13) bromomethane	5.525	94	277886	92.49	ug/L	98
14) chloroethane	5.703	64	222713	80.13	ug/L	99
15) vinyl bromide	6.100	106	269236	103.93	ug/L	100
16) trichlorofluoromethane	6.242	101	408519	102.02	ug/L	97
17) ethyl ether	6.676	74	92959	102.47	ug/L	99
18) acrolein	6.916	56	73383	102.00	ug/L	86
19) freon 113	7.115	151	200807	106.77	ug/L	99
20) 1,1-dichloroethene	7.115	96	242533	102.24	ug/L	98
21) acetone	7.152	58	160872	412.00	ug/L	86
22) acetonitrile	7.607	41	591673	842.97	ug/L	99
23) iodomethane	7.392	142	334774	95.14	ug/L	96
24) carbon disulfide	7.539	76	628262	92.55	ug/L	99
25) methylene chloride	7.858	84	271279	93.43	ug/L	98
26) methyl acetate	7.664	43	275085	95.70	ug/L	100
27) methyl tert butyl ether	8.250	73	561579	95.62	ug/L	98
28) trans-1,2-dichloroethene	8.271	96	235035	96.69	ug/L	96
29) hexane	8.632	57	322175	90.38	ug/L	99
30) di-isopropyl ether	8.883	45	860970	94.13	ug/L	96
31) ethyl tert-butyl ether	9.364	59	841363	100.34	ug/L	99
32) 2-butanone	9.594	72	173501	448.35	ug/L #	87
33) 1,1-dichloroethane	8.862	63	440794	89.41	ug/L	99
34) chloroprene	8.988	53	361659	99.03	ug/L	96
35) acrylonitrile	8.198	53	99285	109.00	ug/L	97
36) vinyl acetate	8.862	86	48802	117.86	ug/L #	90
37) ethyl acetate	9.626	45	54226	109.23	ug/L	98
38) 2,2-dichloropropane	9.652	77	355987	83.00	ug/L	96
39) cis-1,2-dichloroethene	9.626	96	269469	96.46	ug/L	99
40) methyl acrylate	9.709	85	35607	115.91	ug/L #	84
41) propionitrile	9.683	54	619555	990.00	ug/L	99
42) bromochloromethane	9.939	128	134565	97.26	ug/L	99
43) tetrahydrofuran	9.997	42	104249	98.68	ug/L	99
44) chloroform	10.002	83	405089	95.52	ug/L	99
45) tert-butyl formate	10.070	59	252304	95.41	ug/L	99
47) methacrylonitrile	9.887	67	96017	104.59	ug/L	95
48) cyclohexane	10.384	84	386279	95.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.290	97	374355	95.38	ug/L	99
50) iso-butyl alcohol	10.452	43	244814	921.99	ug/L	99
51) 1,1-dichloropropene	10.473	75	324429	99.18	ug/L	99
52) carbon tetrachloride	10.504	117	326367	96.92	ug/L	100
53) tert-amyl alcohol	10.598	73	173748	518.45	ug/L	95
56) benzene	10.745	78	970447	94.35	ug/L	98
57) iso-octane	10.787	57	1021061	100.91	ug/L	99
58) tert-amyl methyl ether	10.797	73	829838	94.27	ug/L	99
59) heptane	10.954	71	181368	93.73	ug/L	98
60) isopropyl acetate	10.672	87	64363	87.08	ug/L #	92
61) 1,2-dichloroethane	10.734	62	304682	90.29	ug/L	98
62) n-butyl alcohol	11.226	56	783902	4930.59	ug/L	99
63) ethyl acrylate	11.477	55	353148	98.05	ug/L	99
64) trichloroethene	11.472	95	233249	100.37	ug/L	99
65) 2-nitropropane	12.267	41	84263	84.65	ug/L #	73
66) methylcyclohexane	11.733	83	484616	93.25	ug/L	99
67) 2-chloroethyl vinyl ether	12.298	63	770222	504.89	ug/L	99
68) methyl methacrylate	11.759	100	52811	127.11	ug/L #	82
69) 1,2-dichloropropane	11.749	63	259495	90.47	ug/L	97
70) dibromomethane	11.895	93	155813	99.64	ug/L	99
71) bromodichloromethane	12.031	83	316631	98.93	ug/L	99
72) epichlorohydrin	12.418	57	190013	461.39	ug/L	99
73) cis-1,3-dichloropropene	12.528	75	389157	101.53	ug/L	99
74) 4-methyl-2-pentanone	12.654	58	578356	391.09	ug/L	96
75) 3-methyl-1-butanol	12.649	55	505649	1841.03	ug/L	99
78) toluene	12.941	92	562623	94.96	ug/L	97
79) trans-1,3-dichloropropene	13.130	75	323111	96.75	ug/L	97
80) ethyl methacrylate	13.151	69	225200	95.58	ug/L	97
81) 1,1,2-trichloroethane	13.365	83	172417	95.45	ug/L	96
82) 2-hexanone	13.574	58	481364	374.71	ug/L	98
83) tetrachloroethene	13.580	166	231440	97.73	ug/L	98
84) 1,3-dichloropropane	13.569	76	330966	94.42	ug/L	99
85) butyl acetate	13.658	56	181814	53.54	ug/L	98
87) dibromochloromethane	13.852	129	227796	91.56	ug/L	98
88) 1,2-dibromoethane	14.024	107	212571	99.67	ug/L	98
89) n-butyl ether	14.490	57	1004771	88.93	ug/L	100
90) chlorobenzene	14.552	112	575496	98.88	ug/L	98
91) 1,1,2-tetrachloroethane	14.615	131	259673	92.25	ug/L	99
92) ethylbenzene	14.626	91	986825	95.24	ug/L	100
93) m,p-xylene	14.746	106	763870	194.90	ug/L	98
94) o-xylene	15.211	106	417605	95.10	ug/L	99
95) styrene	15.217	104	602969	93.85	ug/L	99
96) butyl acrylate	15.018	55	444063	80.84	ug/L	99
97) bromoform	15.489	173	149923	96.34	ug/L	97
98) isopropylbenzene	15.604	105	1107917	93.62	ug/L	99
99) cis-1,4-dichloro-2-butene	15.651	75	105386	86.27	ug/L	99
102) bromobenzene	16.027	156	232596	105.44	ug/L	95
103) 1,1,2,2-tetrachloroethane	15.907	83	321230	100.48	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	41075	89.05	ug/L	99
105) 1,2,3-trichloropropane	15.996	110	78792	107.58	ug/L	98
106) n-propylbenzene	16.064	91	1145939	103.04	ug/L	99
107) 2-chlorotoluene	16.216	126	250426	108.34	ug/L	97
108) 4-chlorotoluene	16.325	91	603375	101.09	ug/L	97
110) 1,3,5-trimethylbenzene	16.231	105	918063	105.71	ug/L	98
111) tert-butylbenzene	16.629	134	204460	118.49	ug/L	93
112) 1,2,4-trimethylbenzene	16.671	105	895946	105.97	ug/L	100
113) sec-butylbenzene	16.869	105	1247585	109.24	ug/L	99
114) 1,3-dichlorobenzene	17.058	146	413125	99.26	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

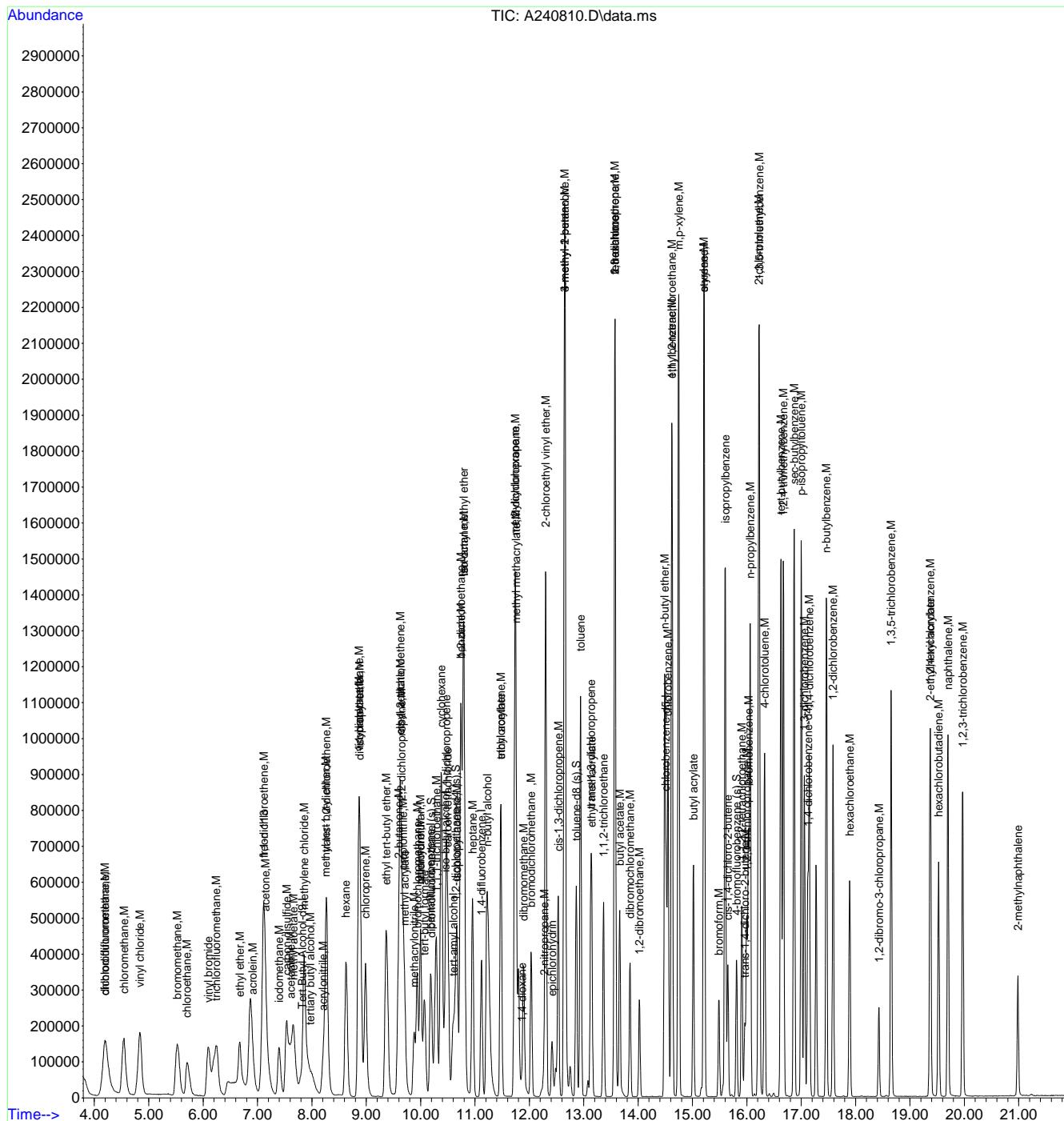
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	1013267	106.91	ug/L	99
116) 1,4-dichlorobenzene	17.147	146	415624	96.94	ug/L	99
117) 1,2-dichlorobenzene	17.586	146	442296	96.15	ug/L	99
119) n-butylbenzene	17.460	92	484211	98.47	ug/L	95
121) 1,2-dibromo-3-chloropr...	18.428	157	82306	95.39	ug/L	94
122) 1,3,5-trichlorobenzene	18.653	180	411267	95.52	ug/L	98
123) 2-ethylhexyl acrylate	19.364	70	62287	18.82	ug/L	98
124) 1,2,4-trichlorobenzene	19.375	180	351917	94.21	ug/L	97
125) hexachlorobutadiene	19.526	225	167781	105.74	ug/L	97
126) naphthalene	19.699	128	900802	86.50	ug/L	99
127) 1,2,3-trichlorobenzene	19.971	180	329812	96.62	ug/L	97
128) hexachloroethane	17.889	201	131071	119.77	ug/L	99
129) 2-methylnaphthalene	20.985	142	193990	48.15	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240810.D
Acq On : 3 Apr 2018 9:44 pm
Operator : JessicaP
Sample : ic9165-100
Misc : MS25128,VA9165,5,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:00:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.815	65	354074	500.00	ug/L	0.00
5) pentafluorobenzene	10.179	168	252317	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.115	114	408092	50.00	ug/L	0.00
76) chlorobenzene-d5	14.514	117	378672	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.119	152	176036	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.200	113	127320	50.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 101.06%	
55) 1,2-dichloroethane-d4 (s)	10.639	65	140021	48.14	ug/L	0.00
Spiked Amount	50.000	Range	81 - 124	Recovery	= 96.28%	
77) toluene-d8 (s)	12.862	98	470692	46.50	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 93.00%	
101) 4-bromofluorobenzene (s)	15.812	95	154378	53.72	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	= 107.44%	

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.945	59	606868	1060.32	ug/L	97
4) 1,4-dioxane	11.858	88	201664	6023.15	ug/L	98
6) chlorodifluoromethane	4.190	51	749759	197.25	ug/L	98
7) dichlorodifluoromethane	4.190	85	813510	198.94	ug/L	98
10) chloromethane	4.541	50	950027	317.95	ug/L	98
11) vinyl chloride	4.833	62	1009386	203.95	ug/L	99
13) bromomethane	5.513	94	521044	179.83	ug/L	99
15) vinyl bromide	6.083	106	519183	207.84	ug/L	100
16) trichlorofluoromethane	6.230	101	786503	203.69	ug/L	97
17) ethyl ether	6.669	74	167763	191.78	ug/L	97
18) acrolein	6.910	56	138240	199.26	ug/L	96
19) freon 113	7.098	151	379979	209.53	ug/L	99
20) 1,1-dichloroethene	7.103	96	442141	193.29	ug/L	97
21) acetone	7.150	58	294457	782.04	ug/L	89
22) acetonitrile	7.605	41	1103868	1630.93	ug/L	99
23) iodomethane	7.386	142	610629	179.95	ug/L	97
24) carbon disulfide	7.527	76	1143305	174.66	ug/L	100
25) methylene chloride	7.851	84	500932	178.92	ug/L	97
26) methyl acetate	7.658	43	505756	182.45	ug/L	99
27) methyl tert butyl ether	8.254	73	1068358	188.64	ug/L	97
28) trans-1,2-dichloroethene	8.264	96	429168	183.09	ug/L	97
29) hexane	8.625	57	596673	173.59	ug/L	99
30) di-isopropyl ether	8.882	45	1603505	181.79	ug/L	93
31) ethyl tert-butyl ether	9.368	59	1598507	197.70	ug/L	99
32) 2-butanone	9.588	72	337109	903.40	ug/L	99
33) 1,1-dichloroethane	8.855	63	804534	169.23	ug/L	100
34) chloroprene	8.981	53	664789	188.78	ug/L	97
35) acrylonitrile	8.191	53	182884	208.22	ug/L	97
36) vinyl acetate	8.855	86	93041	233.01	ug/L #	81
37) ethyl acetate	9.619	45	103188	215.55	ug/L	97
38) 2,2-dichloropropane	9.645	77	666867	161.24	ug/L	97
39) cis-1,2-dichloroethene	9.619	96	501373	186.12	ug/L	99
40) methyl acrylate	9.698	85	67482	227.81	ug/L	97
41) propionitrile	9.687	54	1171308	1940.96	ug/L	89
42) bromochloromethane	9.933	128	252955	189.60	ug/L	97
43) tetrahydrofuran	9.996	42	197036	193.42	ug/L	98
44) chloroform	9.996	83	747139	182.70	ug/L	99
45) tert-butyl formate	10.069	59	476935	187.03	ug/L	99
47) methacrylonitrile	9.881	67	180821	204.26	ug/L	100
48) cyclohexane	10.383	84	737141	189.80	ug/L	98
49) 1,1,1-trichloroethane	10.289	97	708656	187.25	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) iso-butyl alcohol	10.451	43	466337	1821.29	ug/L	97
51) 1,1-dichloropropene	10.466	75	612610	194.21	ug/L	99
52) carbon tetrachloride	10.503	117	61909	190.91	ug/L	100
53) tert-amyl alcohol	10.608	73	332011	1027.38	ug/L	93
56) benzene	10.738	78	1828065	178.56	ug/L	98
57) iso-octane	10.785	57	1963803	194.99	ug/L	98
58) tert-amyl methyl ether	10.796	73	1571559	179.36	ug/L	98
59) heptane	10.953	71	354924	184.28	ug/L	98
60) isopropyl acetate	10.670	87	123008	167.20	ug/L	99
61) 1,2-dichloroethane	10.733	62	580787	172.93	ug/L	99
62) n-butyl alcohol	11.225	56	1530005	9668.49	ug/L	99
63) ethyl acrylate	11.481	55	687032	191.64	ug/L	99
64) trichloroethene	11.471	95	447668	193.54	ug/L	97
65) 2-nitropropane	12.271	41	161855	163.37	ug/L	98
66) methylcyclohexane	11.732	83	915065	176.90	ug/L	99
67) 2-chloroethyl vinyl ether	12.302	63	1505568	991.54	ug/L	97
68) methyl methacrylate	11.758	100	102023	246.71	ug/L #	80
69) 1,2-dichloropropane	11.748	63	492966	172.67	ug/L	96
70) dibromomethane	11.894	93	298603	191.85	ug/L	99
71) bromodichloromethane	12.035	83	609719	191.40	ug/L	97
72) epichlorohydrin	12.417	57	370337	903.46	ug/L	98
73) cis-1,3-dichloropropene	12.532	75	762590	199.88	ug/L	99
74) 4-methyl-2-pentanone	12.653	58	1085545	737.50	ug/L	91
75) 3-methyl-1-butanol	12.653	55	953673	3488.51	ug/L	99
78) toluene	12.940	92	1100169	174.54	ug/L	95
79) trans-1,3-dichloropropene	13.128	75	636051	179.02	ug/L	96
80) ethyl methacrylate	13.149	69	447096	178.36	ug/L	98
81) 1,1,2-trichloroethane	13.364	83	345072	179.56	ug/L	97
82) 2-hexanone	13.573	58	950405	695.43	ug/L	95
83) tetrachloroethene	13.584	166	457646	181.66	ug/L	97
84) 1,3-dichloropropane	13.568	76	661279	177.32	ug/L	98
85) butyl acetate	13.662	56	359714	99.57	ug/L	96
87) dibromochloromethane	13.850	129	458242	173.14	ug/L	99
88) 1,2-dibromoethane	14.023	107	428032	188.66	ug/L	98
89) n-butyl ether	14.488	57	1924760	160.13	ug/L	99
90) chlorobenzene	14.551	112	1171432	189.20	ug/L	97
91) 1,1,1,2-tetrachloroethane	14.614	131	511107	170.68	ug/L	99
92) ethylbenzene	14.624	91	1941975	176.18	ug/L	97
93) m,p-xylene	14.745	106	1529478	366.82	ug/L	92
94) o-xylene	15.210	106	823715	176.32	ug/L	98
95) styrene	15.215	104	1216075	177.91	ug/L	99
96) butyl acrylate	15.017	55	859748	147.12	ug/L	98
97) bromoform	15.487	173	306091	184.88	ug/L	97
98) isopropylbenzene	15.602	105	2135443	169.61	ug/L	97
99) cis-1,4-dichloro-2-butene	15.649	75	209200	160.97	ug/L	97
102) bromobenzene	16.031	156	479460	204.97	ug/L	99
103) 1,1,2,2-tetrachloroethane	15.906	83	635367	187.42	ug/L	100
104) trans-1,4-dichloro-2-b...	15.963	53	80145	163.86	ug/L	90
105) 1,2,3-trichloropropane	15.995	110	155630	200.40	ug/L	97
106) n-propylbenzene	16.063	91	2243608	190.26	ug/L	97
107) 2-chlorotoluene	16.214	126	514652	209.97	ug/L	91
108) 4-chlorotoluene	16.324	91	1240196	195.95	ug/L	98
110) 1,3,5-trimethylbenzene	16.230	105	1833274	199.08	ug/L	97
111) tert-butylbenzene	16.627	134	407613	222.78	ug/L	92
112) 1,2,4-trimethylbenzene	16.675	105	1753183	195.56	ug/L	96
113) sec-butylbenzene	16.868	105	2389642	197.32	ug/L	96
114) 1,3-dichlorobenzene	17.062	146	826037	187.16	ug/L	97
115) p-isopropyltoluene	17.004	119	1976399	196.66	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

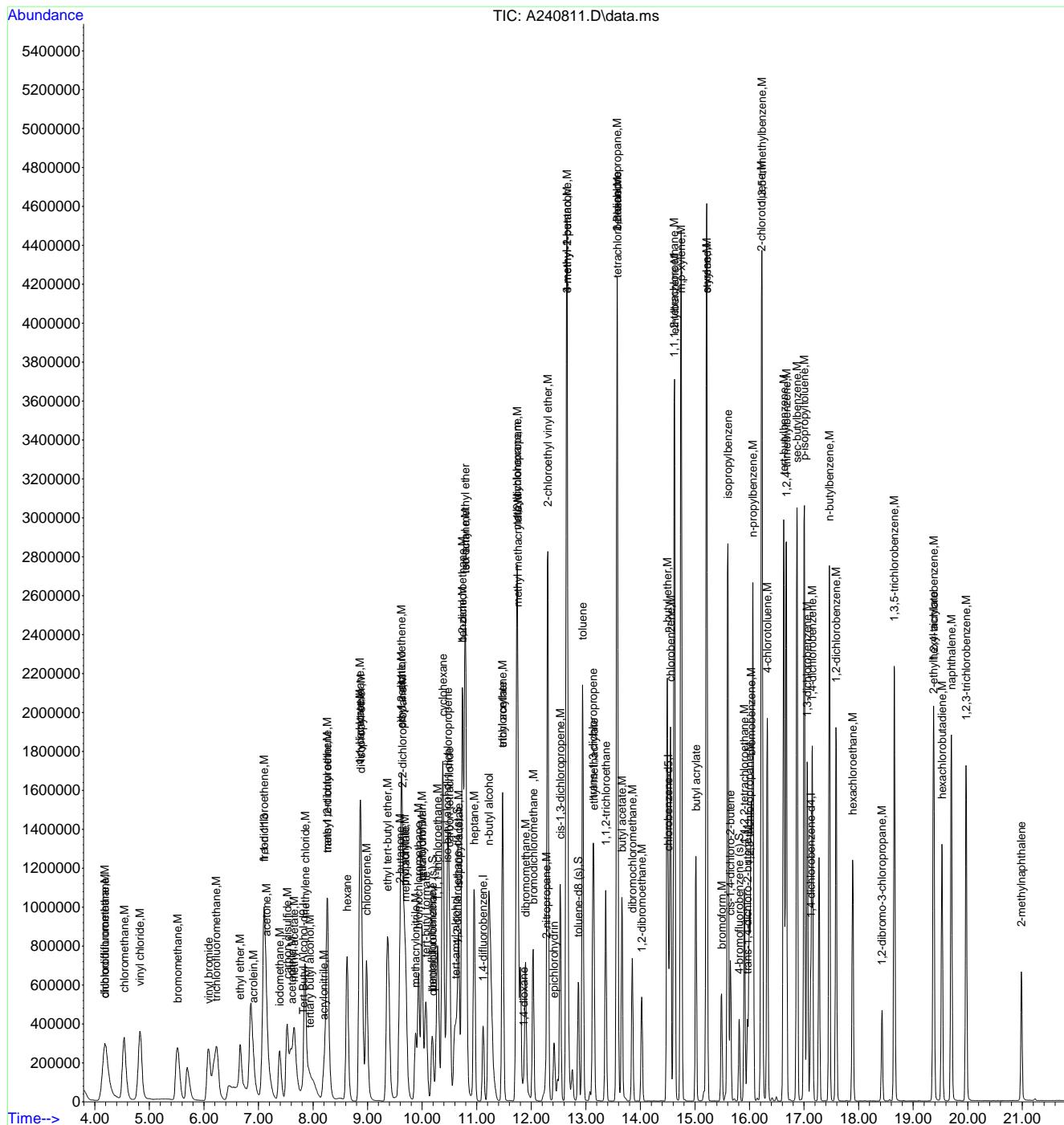
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) 1,4-dichlorobenzene	17.150	146	832045	183.02	ug/L	98
117) 1,2-dichlorobenzene	17.585	146	878687	180.15	ug/L	98
119) n-butylbenzene	17.464	92	957017	183.54	ug/L	93
121) 1,2-dibromo-3-chloropr...	18.427	157	158940	173.72	ug/L	97
122) 1,3,5-trichlorobenzene	18.657	180	815912	178.71	ug/L	99
123) 2-ethylhexyl acrylate	19.363	70	124777	35.56	ug/L	98
124) 1,2,4-trichlorobenzene	19.378	180	695039	175.47	ug/L	96
125) hexachlorobutadiene	19.525	225	346694	206.06	ug/L	98
126) naphthalene	19.698	128	1723988	156.12	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	650544	179.72	ug/L	96
128) hexachloroethane	17.893	201	266932	230.04	ug/L	99
129) 2-methylnaphthalene	20.984	142	387495	90.70	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	380430	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	265452	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	407460	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	321567	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	159292	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.206	113	132572	50.11	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 100.22%			
55) 1,2-dichloroethane-d4 (s)	10.640	65	143763	49.53	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery = 99.06%			
77) toluene-d8 (s)	12.863	98	436189	50.76	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.52%			
101) 4-bromofluorobenzene (s)	15.807	95	132036	50.89	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.78%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.967	59	171935	255.08	ug/L	96
4) 1,4-dioxane	11.858	88	53268	1256.47	ug/L	100
6) chlorodifluoromethane	4.202	51	189181	46.25	ug/L	97
7) dichlorodifluoromethane	4.202	85	201790	45.05	ug/L	95
10) chloromethane	4.536	50	223584	43.76	ug/L	99
11) vinyl chloride	4.834	62	230247	43.76	ug/L	98
13) bromomethane	5.520	94	136699	46.15	ug/L	99
14) chloroethane	5.708	64	113299	48.19	ug/L	96
15) vinyl bromide	6.095	106	141268	52.55	ug/L	100
16) trichlorofluoromethane	6.241	101	192654	46.01	ug/L	95
17) ethyl ether	6.675	74	69348	50.72	ug/L	94
18) acrolein	6.911	56	50291	63.31	ug/L	97
19) freon 113	7.115	151	119862	57.62	ug/L	98
20) 1,1-dichloroethene	7.115	96	112517	45.70	ug/L	99
21) acetone	7.162	58	72551	183.15	ug/L	91
22) acetonitrile	7.674	41	534707	842.27	ug/L #	51
23) iodomethane	7.402	142	232398	46.78	ug/L	95
24) carbon disulfide	7.533	76	446451	46.96	ug/L	99
25) methylene chloride	7.857	84	137963	48.57	ug/L	98
26) methyl acetate	7.664	43	135708	46.15	ug/L	99
27) methyl tert butyl ether	8.250	73	830425	97.56	ug/L	92
28) trans-1,2-dichloroethene	8.265	96	115821	46.97	ug/L	98
29) hexane	8.631	57	141251	39.89	ug/L	99
30) di-isopropyl ether	8.883	45	442091	46.82	ug/L	98
31) ethyl tert-butyl ether	9.364	59	424281	49.65	ug/L	97
32) 2-butanone	9.594	72	84646	199.76	ug/L	90
33) 1,1-dichloroethane	8.862	63	221933	45.65	ug/L	98
34) chloroprene	8.987	53	184451	49.46	ug/L	98
35) acrylonitrile	8.203	53	77675	53.45	ug/L	97
36) vinyl acetate	8.862	86	25804	52.53	ug/L	95
37) ethyl acetate	9.620	45	28657	53.52	ug/L #	83
38) 2,2-dichloropropane	9.657	77	174886	41.97	ug/L	96
39) cis-1,2-dichloroethene	9.625	96	137760	48.61	ug/L	99
40) methyl acrylate	9.698	85	23493	47.65	ug/L	99
41) propionitrile	9.683	54	325388	358.89	ug/L	84
42) bromochloromethane	9.939	128	68207	44.05	ug/L	97
43) tetrahydrofuran	9.991	42	71499	44.86	ug/L	95
44) chloroform	10.002	83	206315	46.81	ug/L	99
45) tert-butyl formate	10.070	59	113392	41.81	ug/L	99
47) methacrylonitrile	9.881	67	66501	49.35	ug/L	97
48) cyclohexane	10.378	84	249768	61.13	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.289	97	181875	45.68	ug/L	98
50) iso-butyl alcohol	10.446	43	122973	494.35	ug/L	96
51) 1,1-dichloropropene	10.472	75	159917	48.19	ug/L	98
52) carbon tetrachloride	10.509	117	160156	46.88	ug/L	99
53) tert-amyl alcohol	10.603	73	91701	254.26	ug/L	95
56) benzene	10.739	78	479528	46.91	ug/L	100
57) iso-octane	10.786	57	478471	47.58	ug/L	98
58) tert-amyl methyl ether	10.797	73	417820	46.96	ug/L	99
59) heptane	10.954	71	97881	50.90	ug/L	96
60) isopropyl acetate	10.666	87	31834	50.33	ug/L	95
61) 1,2-dichloroethane	10.734	62	152006	46.94	ug/L	96
62) n-butyl alcohol	11.220	56	393781	2492.26	ug/L	99
63) ethyl acrylate	11.477	55	167626	47.77	ug/L	99
64) trichloroethene	11.471	95	112217	48.61	ug/L	98
65) 2-nitropropane	12.266	41	54074	43.62	ug/L	# 70
66) methylcyclohexane	11.738	83	231422	44.81	ug/L	99
67) 2-chloroethyl vinyl ether	12.298	63	391454	258.20	ug/L	99
68) methyl methacrylate	11.754	100	34041	48.74	ug/L	# 77
69) 1,2-dichloropropane	11.743	63	125809	46.17	ug/L	100
70) dibromomethane	11.895	93	78262	50.36	ug/L	100
71) bromodichloromethane	12.031	83	153203	48.41	ug/L	99
72) epichlorohydrin	12.418	57	90313	233.79	ug/L	99
73) cis-1,3-dichloropropene	12.528	75	183900	48.28	ug/L	99
74) 4-methyl-2-pentanone	12.648	58	286409	195.59	ug/L	100
75) 3-methyl-1-butanol	12.648	55	258583	979.22	ug/L	99
78) toluene	12.941	92	266833	49.10	ug/L	98
79) trans-1,3-dichloropropene	13.129	75	142178	47.12	ug/L	97
80) ethyl methacrylate	13.145	69	144570	47.43	ug/L	98
81) 1,1,2-trichloroethane	13.359	83	82458	50.53	ug/L	99
82) 2-hexanone	13.569	58	222065	189.94	ug/L	99
83) tetrachloroethene	13.579	166	122224	57.13	ug/L	98
84) 1,3-dichloropropane	13.569	76	157452	49.72	ug/L	98
85) butyl acetate	13.663	56	88434	53.43	ug/L	99
87) dibromochloromethane	13.851	129	108995	50.03	ug/L	98
88) 1,2-dibromoethane	14.024	107	98666	51.21	ug/L	96
89) n-butyl ether	14.489	57	459694	46.21	ug/L	100
90) chlorobenzene	14.547	112	252415	47.89	ug/L	99
91) 1,1,2-tetrachloroethane	14.615	131	125907	49.51	ug/L	97
92) ethylbenzene	14.625	91	446392	46.84	ug/L	99
93) m,p-xylene	14.745	106	343144	95.05	ug/L	98
94) o-xylene	15.211	106	194196	49.50	ug/L	99
95) styrene	15.216	104	269941	46.34	ug/L	99
96) butyl acrylate	15.017	55	219345	47.56	ug/L	99
97) bromoform	15.483	173	72813	51.79	ug/L	99
98) isopropylbenzene	15.598	105	531351	49.70	ug/L	100
99) cis-1,4-dichloro-2-butene	15.650	75	50097	46.97	ug/L	97
102) bromobenzene	16.027	156	104549	49.39	ug/L	92
103) 1,1,2,2-tetrachloroethane	15.907	83	155068	50.55	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	37055	62.44	ug/L	96
105) 1,2,3-trichloropropane	15.995	110	38171	52.30	ug/L	99
106) n-propylbenzene	16.058	91	537220	49.48	ug/L	99
107) 2-chlorotoluene	16.215	126	112150	50.56	ug/L	95
108) 4-chlorotoluene	16.325	91	289073	50.47	ug/L	99
110) 1,3,5-trimethylbenzene	16.231	105	430074	50.96	ug/L	98
111) tert-butylbenzene	16.628	134	96047	55.80	ug/L	97
112) 1,2,4-trimethylbenzene	16.670	105	425804	51.72	ug/L	99
113) sec-butylbenzene	16.869	105	594663	54.05	ug/L	99
114) 1,3-dichlorobenzene	17.057	146	200814	49.61	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

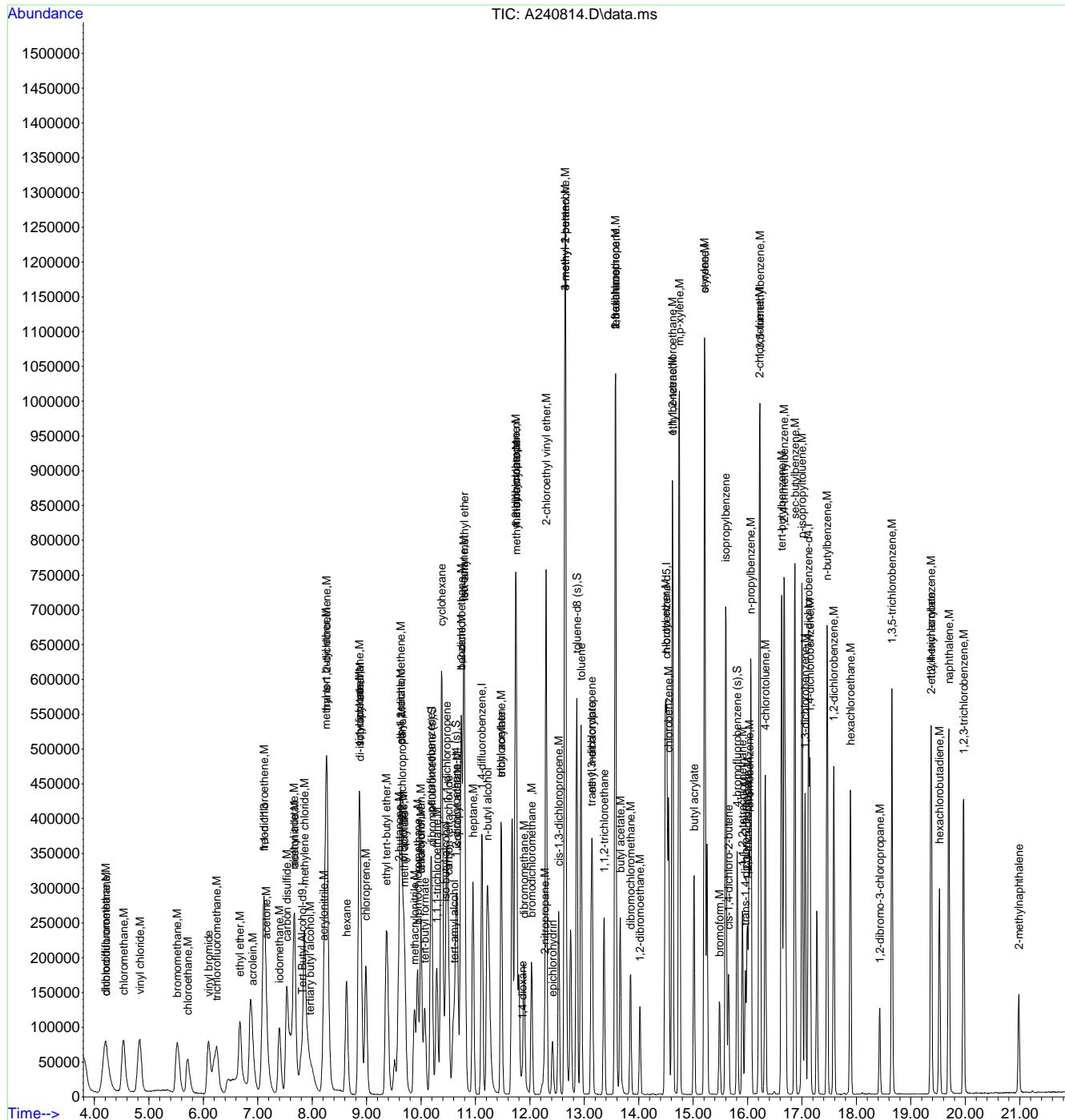
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	477371	52.40	ug/L	99
116) 1,4-dichlorobenzene	17.151	146	201296	48.93	ug/L	100
117) 1,2-dichlorobenzene	17.585	146	215829	48.72	ug/L	99
119) n-butylbenzene	17.460	92	233622	48.80	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.427	157	41307	49.89	ug/L	97
122) 1,3,5-trichlorobenzene	18.652	180	205551	49.03	ug/L	99
123) 2-ethylhexyl acrylate	19.364	70	31959	10.06	ug/L	93
124) 1,2,4-trichlorobenzene	19.374	180	181919	50.05	ug/L	99
125) hexachlorobutadiene	19.526	225	77284	50.76	ug/L	96
126) naphthalene	19.698	128	471102	51.10	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	164508	50.08	ug/L	94
128) hexachloroethane	17.889	201	91577	57.54	ug/L	99
129) 2-methylnaphthalene	20.985	142	83977	23.24	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240815.D
 Acq On : 4 Apr 2018 12:09 am
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 12:22:06 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

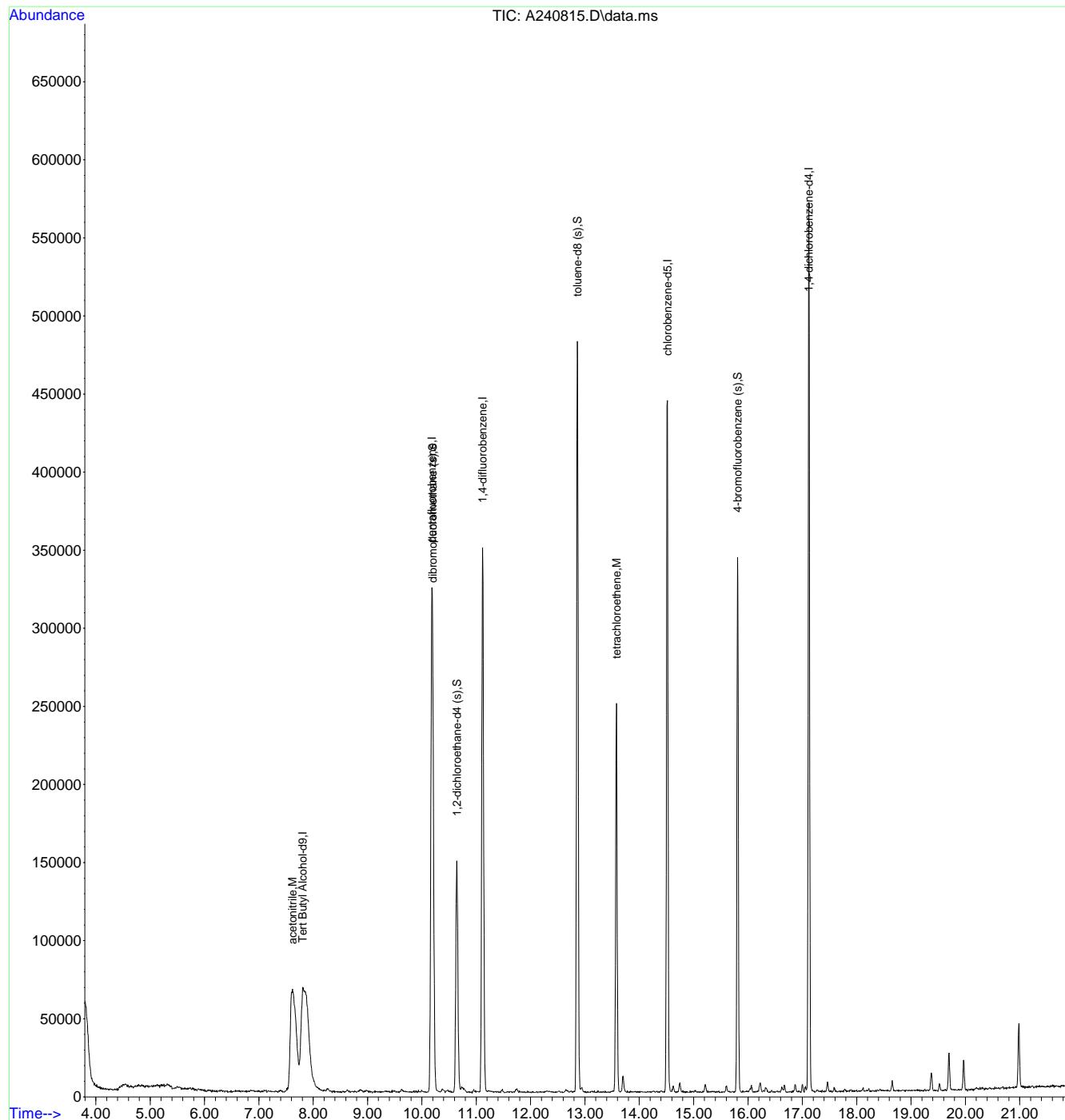
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.806	65	374470	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	252557	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.117	114	371084	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	280113	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.121	152	165033	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.201	113	127013	50.46	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	100.92%	
55) 1,2-dichloroethane-d4 (s)	10.641	65	134883	51.03	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery	=	102.06%	
77) toluene-d8 (s)	12.858	98	377473	50.43	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	100.86%	
101) 4-bromofluorobenzene (s)	15.808	95	127957	47.60	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	95.20%	
<hr/>						
Target Compounds						
22) acetonitrile	7.618	41	289084	478.61	ug/L	98
83) tetrachloroethene	13.580	166	86497	46.41	ug/L	97
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240815.D
 Acq On : 4 Apr 2018 12:09 am
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 12:22:06 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.795	65	411626	500.00	ug/L	-0.01
5) pentafluorobenzene	10.170	168	259385	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.106	114	381142	50.00	ug/L	0.00
76) chlorobenzene-d5	14.511	117	347164	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.110	152	204541	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	129936	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.52%		
55) 1,2-dichloroethane-d4 (s)	10.630	65	131069	48.27	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	= 96.54%		
77) toluene-d8 (s)	12.853	98	421669	45.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 90.92%		
101) 4-bromofluorobenzene (s)	15.802	95	157327	47.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 94.44%		
Target Compounds						
3) tertiary butyl alcohol	7.921	59	76779	105.27	ug/L	94
4) 1,4-dioxane	11.843	88	23112	503.84	ug/L	93
6) chlorodifluoromethane	4.212	51	69818	17.47	ug/L	93
7) dichlorodifluoromethane	4.191	85	99706	22.78	ug/L	94
10) chloromethane	4.531	50	102737	20.58	ug/L	99
11) vinyl chloride	4.830	62	124164	24.15	ug/L	97
13) bromomethane	5.509	94	73325	25.34	ug/L	98
14) chloroethane	5.708	64	57364	24.56	ug/L	96
15) vinyl bromide	6.090	106	76286	29.04	ug/L	100
16) trichlorofluoromethane	6.236	101	98970	24.19	ug/L	96
18) acrolein	6.901	56	15093	19.44	ug/L	96
19) freon 113	7.110	151	53380	26.26	ug/L	98
20) 1,1-dichloroethene	7.099	96	53695	22.32	ug/L	94
21) acetone	7.141	58	26816	69.28	ug/L	# 84
22) acetonitrile	7.591	41	112472	181.31	ug/L	95
25) methylene chloride	7.847	84	60092	21.65	ug/L	92
26) methyl acetate	7.638	43	46308	16.12	ug/L	95
28) trans-1,2-dichloroethene	8.255	96	50755	21.06	ug/L	92
29) hexane	8.616	57	59869	17.30	ug/L	97
30) di-isopropyl ether	8.872	45	169831	18.41	ug/L	79
31) ethyl tert-butyl ether	9.359	59	181977	21.79	ug/L	99
32) 2-butanone	9.579	72	31511	76.10	ug/L	# 73
33) 1,1-dichloroethane	8.846	63	90889	19.13	ug/L	99
34) chloroprene	8.972	53	67121	18.42	ug/L	95
36) vinyl acetate	8.846	86	9447	19.68	ug/L	# 49
37) ethyl acetate	9.605	45	9244	17.67	ug/L	# 42
38) 2,2-dichloropropane	9.636	77	93665	23.00	ug/L	96
39) cis-1,2-dichloroethene	9.610	96	57371	20.72	ug/L	97
42) bromochloromethane	9.929	128	28588	18.89	ug/L	# 84
44) chloroform	9.986	83	86089	19.99	ug/L	98
45) tert-butyl formate	10.054	59	59099	22.30	ug/L	97
48) cyclohexane	10.374	84	88262	22.11	ug/L	94
49) 1,1,1-trichloroethane	10.274	97	90943	23.38	ug/L	96
50) iso-butyl alcohol	10.436	43	46906	192.97	ug/L	95
51) 1,1-dichloropropene	10.457	75	63217	19.50	ug/L	98
52) carbon tetrachloride	10.494	117	78109	23.40	ug/L	99
53) tert-amyl alcohol	10.588	73	37288	105.81	ug/L	94
56) benzene	10.729	78	188600	19.72	ug/L	99
57) iso-octane	10.776	57	189492	20.15	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
58) tert-amyl methyl ether	10.787	73	180087	21.64	ug/L	100
59) heptane	10.944	71	34626	19.25	ug/L	96
60) isopropyl acetate	10.656	87	12640	21.37	ug/L	# 76
61) 1,2-dichloroethane	10.724	62	59694	19.71	ug/L	97
62) n-butyl alcohol	11.205	56	152515	1031.93	ug/L	93
63) ethyl acrylate	11.467	55	60187	18.34	ug/L	96
64) trichloroethene	11.461	95	43880	20.32	ug/L	97
66) methylcyclohexane	11.723	83	101064	20.92	ug/L	95
67) 2-chloroethyl vinyl ether	12.293	63	141047	99.46	ug/L	98
69) 1,2-dichloropropane	11.733	63	48034	18.85	ug/L	93
70) dibromomethane	11.885	93	30985	21.32	ug/L	96
71) bromodichloromethane	12.021	83	61409	20.74	ug/L	99
72) epichlorohydrin	12.408	57	32528	90.02	ug/L	98
73) cis-1,3-dichloropropene	12.523	75	72121	20.24	ug/L	95
74) 4-methyl-2-pentanone	12.643	58	109788	80.15	ug/L	94
75) 3-methyl-1-butanol	12.638	55	103950	420.83	ug/L	94
78) toluene	12.931	92	106886	18.22	ug/L	96
79) trans-1,3-dichloropropene	13.119	75	63976	19.64	ug/L	97
81) 1,1,2-trichloroethane	13.355	83	34585	19.63	ug/L	96
82) 2-hexanone	13.564	58	100071	79.28	ug/L	95
83) tetrachloroethene	13.574	166	47095	20.39	ug/L	95
84) 1,3-dichloropropane	13.559	76	66602	19.48	ug/L	98
85) butyl acetate	13.653	56	36753	17.88	ug/L	92
87) dibromochloromethane	13.841	129	48560	20.65	ug/L	96
88) 1,2-dibromoethane	14.014	107	45263	21.76	ug/L	98
89) n-butyl ether	14.479	57	199647	18.59	ug/L	96
90) chlorobenzene	14.542	112	117307	20.61	ug/L	97
91) 1,1,1,2-tetrachloroethane	14.605	131	55032	20.05	ug/L	98
92) ethylbenzene	14.615	91	202650	19.70	ug/L	99
93) m,p-xylene	14.735	106	160380	41.15	ug/L	98
94) o-xylene	15.201	106	86741	20.48	ug/L	97
95) styrene	15.206	104	131454	20.90	ug/L	97
96) butyl acrylate	15.007	55	95756	19.23	ug/L	99
97) bromoform	15.478	173	34877	22.98	ug/L	98
98) isopropylbenzene	15.593	105	238691	20.68	ug/L	100
99) cis-1,4-dichloro-2-butene	15.640	75	22126	19.21	ug/L	97
102) bromobenzene	16.022	156	53893	19.83	ug/L	98
103) 1,1,2,2-tetrachloroethane	15.897	83	75382	19.14	ug/L	97
105) 1,2,3-trichloropropane	15.991	110	19623	20.94	ug/L	93
106) n-propylbenzene	16.053	91	261927	18.79	ug/L	99
107) 2-chlorotoluene	16.205	126	55932	19.64	ug/L	100
108) 4-chlorotoluene	16.315	91	145060	19.73	ug/L	96
110) 1,3,5-trimethylbenzene	16.221	105	199655	18.42	ug/L	99
111) tert-butylbenzene	16.618	134	41222	18.65	ug/L	97
112) 1,2,4-trimethylbenzene	16.660	105	197025	18.64	ug/L	98
113) sec-butylbenzene	16.859	105	270596	19.16	ug/L	98
114) 1,3-dichlorobenzene	17.047	146	105467	20.29	ug/L	97
115) p-isopropyltoluene	16.990	119	227320	19.43	ug/L	98
116) 1,4-dichlorobenzene	17.141	146	108267	20.50	ug/L	97
117) 1,2-dichlorobenzene	17.575	146	110339	19.40	ug/L	98
119) n-butylbenzene	17.455	92	117138	19.06	ug/L	97
121) 1,2-dibromo-3-chloropr...	18.423	157	21029	19.78	ug/L	93
122) 1,3,5-trichlorobenzene	18.642	180	102815	19.10	ug/L	99
123) 2-ethylhexyl acrylate	19.354	70	11442	2.81	ug/L	98
124) 1,2,4-trichlorobenzene	19.364	180	90555	19.40	ug/L	97
125) hexachlorobutadiene	19.516	225	40215	20.57	ug/L	95
126) naphthalene	19.688	128	232357	19.63	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
127) 1,2,3-trichlorobenzene	19.960	180	84095	19.94	ug/L	96
129) 2-methylnaphthalene	20.975	142	39667	8.55	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\

Data File : a241495.d

Acq On : 8 May 2018 6:46 am

Operator : jessicap

Sample : cc9165-20

Misc : MS26069,VA9204,5,,,,1

ALS Vial : 2 Sample Multiplier: 1

Inst : MSA

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M

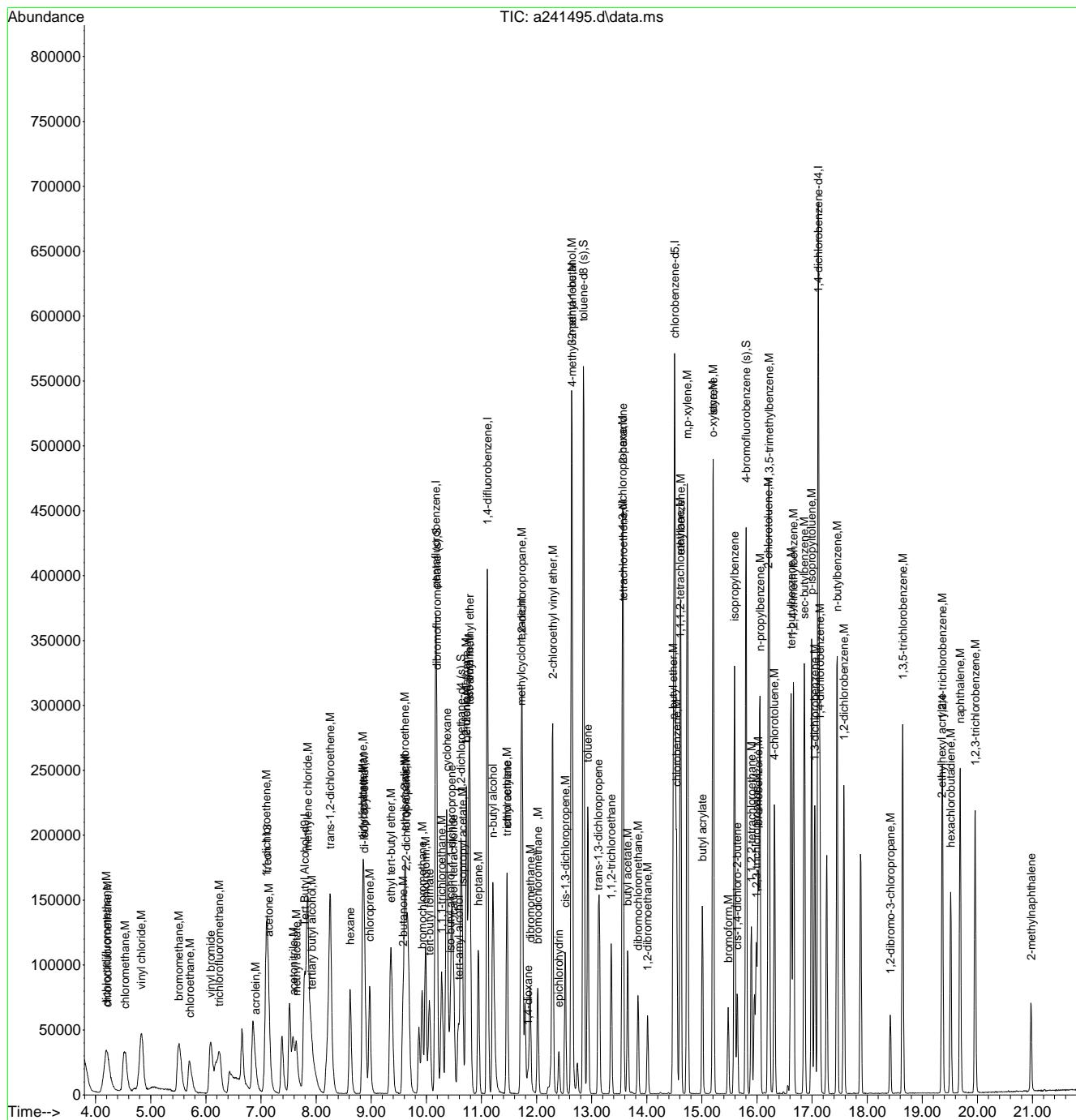
Quant Results File: MA9165.RES

Quant Time: May 09 03:29:37 2018

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Tue Apr 17 15:31:13 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.800	65	257309	500.00	ug/L	0.00
5) pentafluorobenzene	10.169	168	164708	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.111	114	243533	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	216423	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.115	152	126773	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	82998	50.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.12%	
55) 1,2-dichloroethane-d4 (s)	10.630	65	83773	48.29	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	96.58%	
77) toluene-d8 (s)	12.852	98	274165	47.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.82%	
101) 4-bromofluorobenzene (s)	15.802	95	98618	47.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	95.52%	
Target Compounds						
3) tertiary butyl alcohol	7.915	59	49186	107.89	ug/L	96
4) 1,4-dioxane	11.848	88	15929	555.51	ug/L	92
6) chlorodifluoromethane	4.191	51	41478	16.34	ug/L	98
7) dichlorodifluoromethane	4.176	85	74945	26.97	ug/L	98
10) chloromethane	4.521	50	69926	22.06	ug/L	99
11) vinyl chloride	4.819	62	79530	24.36	ug/L	97
13) bromomethane	5.509	94	44858	24.41	ug/L	95
14) chloroethane	5.703	64	36149	24.37	ug/L	97
15) vinyl bromide	6.079	106	43789	26.25	ug/L	98
16) trichlorofluoromethane	6.236	101	61450	23.65	ug/L	90
17) ethyl ether	6.660	74	17161	20.23	ug/L	# 84
18) acrolein	6.895	56	7609	15.44	ug/L	95
19) freon 113	7.105	151	31605	24.49	ug/L	99
20) 1,1-dichloroethene	7.094	96	30484	19.95	ug/L	89
21) acetone	7.136	58	16824	68.45	ug/L	96
22) acetonitrile	7.596	41	74933	190.23	ug/L	97
23) iodomethane	7.377	142	51095	16.58	ug/L	99
24) carbon disulfide	7.512	76	104715	17.75	ug/L	96
25) methylene chloride	7.842	84	34906	19.80	ug/L	86
26) methyl acetate	7.643	43	30759	16.86	ug/L	96
27) methyl tert butyl ether	8.234	73	113059	21.41	ug/L	97
28) trans-1,2-dichloroethene	8.250	96	30548	19.96	ug/L	97
29) hexane	8.621	57	37989	17.29	ug/L	95
30) di-isopropyl ether	8.867	45	99509	16.99	ug/L	85
31) ethyl tert-butyl ether	9.353	59	102283	19.29	ug/L	97
32) 2-butanone	9.578	72	19716	74.99	ug/L	# 80
33) 1,1-dichloroethane	8.846	63	55536	18.41	ug/L	97
34) chloroprene	8.972	53	42315	18.29	ug/L	93
35) acrylonitrile	8.187	53	15692	17.40	ug/L	97
36) vinyl acetate	8.846	86	5681	18.64	ug/L	# 48
37) ethyl acetate	9.615	45	5374	16.17	ug/L	# 61
38) 2,2-dichloropropane	9.641	77	52465	20.29	ug/L	96
39) cis-1,2-dichloroethene	9.610	96	34841	19.81	ug/L	96
40) methyl acrylate	9.688	85	5082	16.61	ug/L	99
41) propionitrile	9.667	54	76664	136.28	ug/L	84
42) bromochloromethane	9.924	128	17573	18.29	ug/L	89
43) tetrahydrofuran	9.981	42	14868	15.04	ug/L	94
44) chloroform	9.986	83	52263	19.11	ug/L	98
45) tert-butyl formate	10.054	59	20364	12.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.871	67	15135	18.10	ug/L	83
48) cyclohexane	10.373	84	50488	19.91	ug/L	93
49) 1,1,1-trichloroethane	10.279	97	53386	21.61	ug/L	95
50) iso-butyl alcohol	10.447	43	29068	188.33	ug/L	95
51) 1,1-dichloropropene	10.462	75	39659	19.26	ug/L	98
52) carbon tetrachloride	10.488	117	46188	21.79	ug/L	99
53) tert-amyl alcohol	10.583	73	22514	100.61	ug/L	97
56) benzene	10.729	78	119967	19.64	ug/L	99
57) iso-octane	10.776	57	110920	18.46	ug/L	99
58) tert-amyl methyl ether	10.787	73	103985	19.56	ug/L	97
59) heptane	10.943	71	22709	19.76	ug/L	96
60) isopropyl acetate	10.656	87	8173	21.62	ug/L #	69
61) 1,2-dichloroethane	10.724	62	37009	19.12	ug/L	99
62) n-butyl alcohol	11.210	56	95665	1013.02	ug/L	96
63) ethyl acrylate	11.466	55	36120	17.22	ug/L	96
64) trichloroethylene	11.466	95	28263	20.48	ug/L	97
65) 2-nitropropane	12.256	41	9088	12.27	ug/L #	53
66) methylcyclohexane	11.728	83	62179	20.14	ug/L	96
67) 2-chloroethyl vinyl ether	12.293	63	32542	35.91	ug/L	98
68) methyl methacrylate	11.749	100	8234	19.72	ug/L #	48
69) 1,2-dichloropropane	11.733	63	29929	18.38	ug/L	94
70) dibromomethane	11.880	93	18772	20.21	ug/L	98
71) bromodichloromethane	12.026	83	37937	20.06	ug/L	98
72) epichlorohydrin	12.408	57	19807	85.79	ug/L	99
73) cis-1,3-dichloropropene	12.523	75	43876	19.27	ug/L	95
74) 4-methyl-2-pentanone	12.643	58	71466	81.66	ug/L	93
75) 3-methyl-1-butanol	12.638	55	64229	406.95	ug/L	94
78) toluene	12.931	92	69408	18.98	ug/L	98
79) trans-1,3-dichloropropene	13.119	75	36913	18.18	ug/L	99
80) ethyl methacrylate	13.140	69	38485	18.76	ug/L	96
81) 1,1,2-trichloroethane	13.355	83	21452	19.53	ug/L	95
82) 2-hexanone	13.564	58	60690	77.13	ug/L	92
83) tetrachloroethylene	13.574	166	29766	20.67	ug/L	97
84) 1,3-dichloropropane	13.559	76	39372	18.47	ug/L	98
85) butyl acetate	13.653	56	22181	17.17	ug/L	93
87) dibromochloromethane	13.841	129	28428	19.39	ug/L	98
88) 1,2-dibromoethane	14.019	107	27468	21.18	ug/L	93
89) n-butyl ether	14.484	57	128695	19.22	ug/L	97
90) chlorobenzene	14.542	112	74040	20.87	ug/L	95
91) 1,1,1,2-tetrachloroethane	14.610	131	35332	20.64	ug/L	98
92) ethylbenzene	14.620	91	132723	20.69	ug/L	99
93) m,p-xylene	14.741	106	103484	42.59	ug/L	99
94) o-xylene	15.206	106	58090	22.00	ug/L	99
95) styrene	15.206	104	81939	20.90	ug/L	97
96) butyl acrylate	15.007	55	57538	18.54	ug/L	98
97) bromoform	15.478	173	21121	22.32	ug/L	99
98) isopropylbenzene	15.593	105	155145	21.56	ug/L	99
99) cis-1,4-dichloro-2-butene	15.645	75	11784	16.41	ug/L	98
102) bromobenzene	16.022	156	33302	19.77	ug/L	94
103) 1,1,2,2-tetrachloroethane	15.902	83	46775	19.16	ug/L	99
104) trans-1,4-dichloro-2-b...	15.954	53	8322	17.62	ug/L	95
105) 1,2,3-trichloropropane	15.991	110	11843	20.39	ug/L	95
106) n-propylbenzene	16.053	91	170440	19.73	ug/L	99
107) 2-chlorotoluene	16.210	126	36208	20.51	ug/L	97
108) 4-chlorotoluene	16.320	91	90491	19.85	ug/L	99
110) 1,3,5-trimethylbenzene	16.221	105	131791	19.62	ug/L	97
111) tert-butylbenzene	16.618	134	26317	19.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

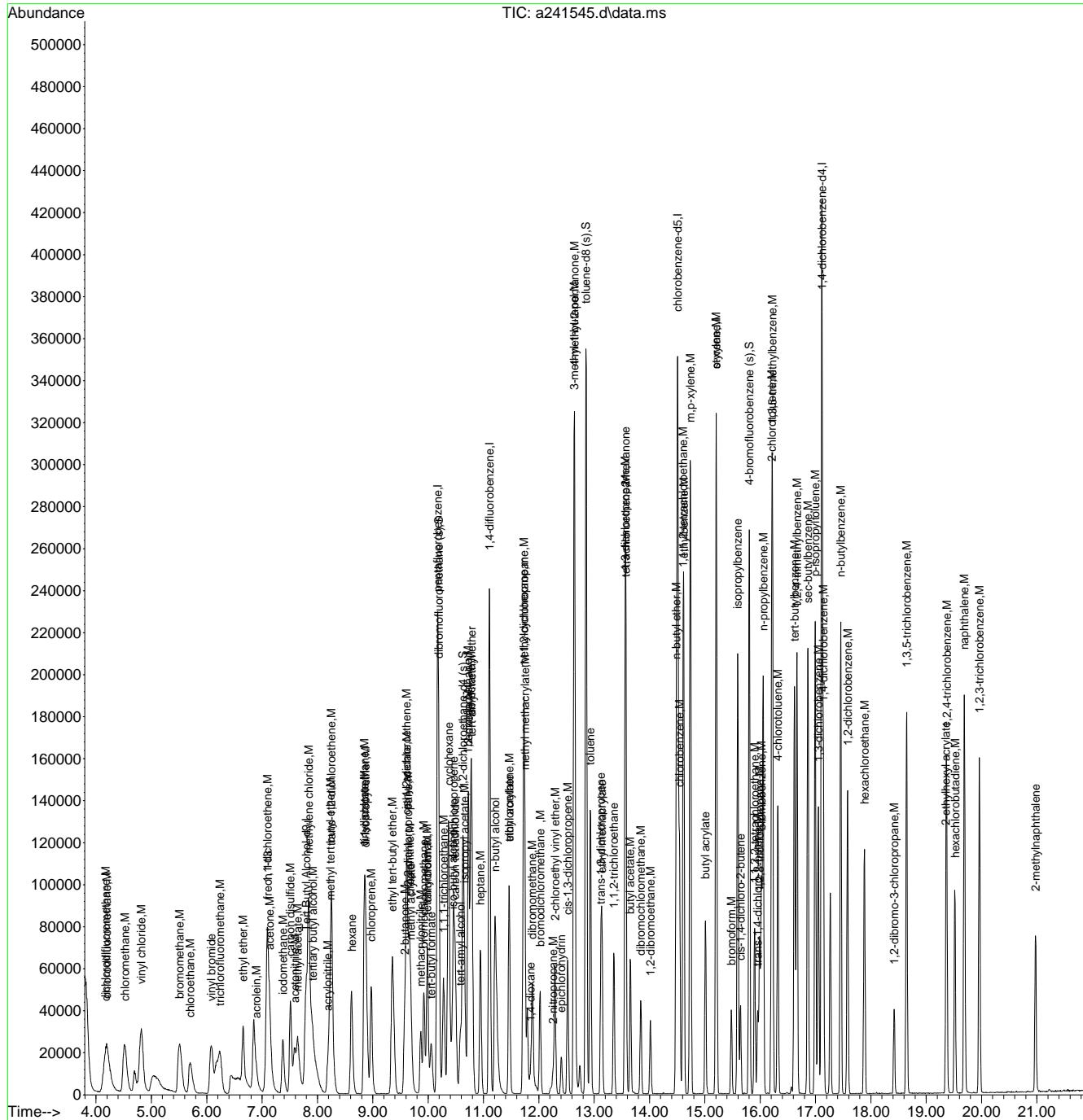
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
112) 1,2,4-trimethylbenzene	16.665	105	128853	19.66	ug/L	98
113) sec-butylbenzene	16.864	105	175055	19.99	ug/L	99
114) 1,3-dichlorobenzene	17.052	146	65409	20.31	ug/L	96
115) p-isopropyltoluene	16.995	119	147573	20.35	ug/L	99
116) 1,4-dichlorobenzene	17.141	146	66754	20.39	ug/L	99
117) 1,2-dichlorobenzene	17.581	146	69843	19.81	ug/L	97
119) n-butylbenzene	17.455	92	74775	19.63	ug/L	99
121) 1,2-dibromo-3-chloropr...	18.423	157	14853	22.54	ug/L	92
122) 1,3,5-trichlorobenzene	18.647	180	66267	19.86	ug/L	98
123) 2-ethylhexyl acrylate	19.354	70	5473	2.17	ug/L	92
124) 1,2,4-trichlorobenzene	19.369	180	60751	21.00	ug/L	98
125) hexachlorobutadiene	19.521	225	25600	21.13	ug/L	96
126) naphthalene	19.688	128	173692	23.67	ug/L	98
127) 1,2,3-trichlorobenzene	19.960	180	60805	23.26	ug/L	97
128) hexachloroethane	17.884	201	23867	18.84	ug/L	98
129) 2-methylnaphthalene	20.975	142	45267	15.74	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1
 Inst : MSA

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents		Lot #		Column		Method		Rx624/30mx0.25mmxx1.4um	
Standard	ABK V018-2615-136.1	C V018-2615-140.5	E V018-2615-121.36	100ppm		Init Calib Date		V8260C	
Standard Concentration	100-10,000 ppm	100ppm	100ppm	Ext ABK V018-2615-137.2.		Ext C V015-2615-141.8.,2		Ext FA V018-2615-133.7	
Standard Concentration	100-10,000 ppm	100 ppm	100 ppm	$\frac{0.5}{100/1000 \text{ ppm}}$		Analysis Date		4/20/2018	
Internal Standard/Surrogate Concentration	Ext Chlorodifluoromethane	V018-2615-132.3	100 ppm	Sequence loaded by		Robert Szot		Robert Szot	
Initial Calibration Method	V018-2615-130	50/500ppm	50/500ppm	Data processed by		Robert Szot		V2V1992	
pH Paper Lot#	M2V1992	216315	216315	Batch ID		Matrix		AQ	
				Approved By:		JESSICA		5/15/2018 5:29:44 PM	
				Approved Date:					

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2V 49934	IB	NA			5			1	ok	
2V 49935	BFB	NA			5			2	ok	
2V 49936	IC1992-0.5	NA		8260 initial cal.	5			3	ok	2.5 uL ABK, C, E / 500 mL DI H2O
2V 49937	IC1992-1	NA		8260 initial cal.	5			4	ok	5 uL ABK, C, E / 500 mL DI H2O
2V 49938	IC1992-2	NA		8260 initial cal.	5			5	ok	10 uL ABK, C, E / 500 mL DI H2O
2V 49939	IC1992-5	NA		8260 initial cal.	5			6	ok	10 uL ABK, C, E / 200 mL DI H2O
2V 49940	IC1992-10	NA		8260 initial cal.	5			7	ok	20 uL ABK, C, E / 200 mL DI H2O
2V 49941	IC1992-20	NA		8260 initial cal.	5			8	ok	40 uL ABK, C, E / 200 mL DI H2O
2V 49942	ICC1992-50	NA		8260 initial cal.	5			9	ok	100 uL ABK, C, E / 200 mL DI H2O
2V 49943	IC1992-100	NA		8260 initial cal.	5			10	ok	200 uL ABK, C, E / 200 mL DI H2O
2V 49944	IC1992-200	NA		8260 initial cal.	5			11	ok	400 uL ABK, C, E / 200 mL DI H2O

OR048-01
Rev Date: 12/18/2017

Page 1 of 2



Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2V	49945	IB	NA			5			12	ok	
2V	49946	IB	NA			5			13	ok	
2V	49947	ICV1992-50	NA		8260 initial cal.	5			14	ok	100 uL Ext ABK, Ext C, Ext E / 200 mL DI H2O
2V	49948	ICV1992-50	NA		8260 initial cal.	5			15	ok	100 uL Ext PA, Ext chlorodifluoromethane / 200 mL DI H2O
2V	49949	IB	NA			5			16	ok	
2V	49950	IB	NA			5			17	ok	
2V	49951	BFB2	NA			5			18	ok	(8: 45 am) 4/23/18.
2V	499523	ICV1992-50	NA		8260 initial Cal.	5			19	ok	50uL Ext C/ 100mL V018-2615-1411.2 Ext C

GCMS Volatile Run Log

Standard / Reagents		Lot #			
Standards	ABK V018-2623-05.7	C V018-2623-10.3	E V018-2623-03.8	Method	ZB624(60mx0.25mmx1.4um)
Standard Concentration	100ppm	100ppm	100ppm	Init Calib Date	V8260C 4/3/2018
Internal Surrogate	V018-2615-130				
Internal Surrogate Concentration	50/1500ppm				
Rough Review Completed	Jessica Potts 5/10/18.			Analysis Date	5/9/2018
Initial Calibration Method	M2V1992			Sequence loaded by	Jessica Potts
pH Paper Lot#	216315			Data processed by	janellec
				Batch ID	V2V2014
				Matrix	AQ
				Approved By:	OWENM
				Approved Date:	5/21/2018 11:39:31 AM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments	
2V	50452	IB		NA		5			1	ok		
2V	50453	CC1992-20		NA		5			2	ok	20uL ABK, C/E/100mL failed high	
2V	50454	CC1992-20		NA		5			3	ok	20uL ABK, C/E/100mL failed high	
2V	50455	BFB/C/C1992-20		NA		5			4	ok	20uL ABK, C/E/100mL (9:48 am) 5/9/18, # 3, 12,120,122 high. # 7, 10 low.	
2V	50456	CC1992-20		NA		5			5	ok	20uL ABK, C/E/100mL # 7 low. # 12,96 high	
2V	50457	CC1992-1		NA		5			6	ok	1uL ABK, C, E/100mL # 7 high, 10 high can not report chloromethane hits	
2V	50458	BS		NA		5			7	ok	50uL ABK, C, E/100mL # 12 high	
2V	50459	IB		NA		5			8	ok		
2V	50460	MB		NA		5			9	ok		
2V	50461	JC65733-1	6	NA	MS26177	V8260SL,11TCA, PCE	5	1	10	ok		
2V	50462	JC65733-2	3	NA	MS26177	V8260SL, 11TCA, PCE, VC	5	1	11	ok		

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2V	50463	JC65719-4	1	NA	MS26169	V8260BTXMT	5		1	12	ok
2V	50464	JC65719-5	2	NA	MS26169	V8260BTXMT	5		1	13	ok ms in next batch
2V	50465	JC65719-6	1	NA	MS26169	V8260BTXMT	5		1	14	ok RR 1X surrogate out
2V	50466	JC65733-1MS	5	NA	MS26177	V8260SL, 11TCA, PCE	5		1	15	ok 20uL ABK, C, E/40mL RR
2V	50467	IB		NA			5			16	ok
2V	50468	JC65733-2DUP	2	NA	MS26177	V8260SL, 11TCA, PCE, VC	5		1	17	ok
2V	50469	JC65632-18	1	NA	MS26140	V8260SL	5		1	18	ok report vinyl chloride from this run +A24515
2V	50470	JC65632-17	1	NA	MS26140	V8260SL	5		1	19	ok report vinyl chloride from this run +A241514
2V	50471	JC65733-3	5	NA	MS26177	V8260SL,11TCA, PCE	5		1	20	ok
2V	50472	JC65733-4	2	NA	MS26177	V8260SL,11TCA, PCE	5		1	21	ok
2V	50473	JC65719-1	1	NA	MS26169	V8260BTXMT	5		1	22	ok
2V	50474	JC65719-3	1	NA	MS26169	V8260BTXMT	5		1	23	ok
2V	50475	JC65719-2	1	NA	MS26169	V8260BTXMT	5		1	24	ok (7.24 pm) 5/9/18.

GCMS Volatile Run Log

Standard / Reagents				Lot #							
Standards	ABK V018-2623-05.7	C V018-2623-10.3		E V018-2623-03.8				Column		RXI624 (30M X0.25mm X 1.4um)	
Standard Concentration	100ppm	100ppm		100ppm				Method		V8260C	
Internal Surrogate	V018-2615-149							Init Calib Date		4/3/2018	
Internal Surrogate Concentration	50/500ppm										
								Analysis Date		5/10/2018	
								Sequence loaded by		Jessica Potts	
								Data processed by		nizele/mariann	
								Batch ID		V2V2015	
								Matrix		AQ	
Rough Review Completed	Jessica Potts 5/11/18.							Approved By:		JESSICA	
Initial Calibration Method	M2V1992							Approved Date:		5/16/2018 2:25:32 PM	
pH Paper Lot#	216315										

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2V 50476	IB	NA			5			1	ok	
2V 50477	BFBICC1992-20	NA			5			2	ok/ok	20uL ABK, C, E/100mL (6:26 am) 5/10/18. # 13 high, 74 low.
2V 50478	BS2	NA			5			3	ok	50uL ABK, C, E/100mL V2V2014
2V 50479	IB	NA			5			4	ok	V2V2014
2V 50480	MB2	NA			5			5	ok	V2V2014
2V 50481	JC65719-5MS	1	NA	MS26169	V8260BTXMT	5	1	6	ok	20uL ABK,C, E/40mL V2V2014
2V 50482	BS	NA			5			7	ok	50uL ABK, C, E/100mL V2V2015 TCLP
2V 50483	IB	NA			5			8	ok	
2V 50484	MB	NA			5			9	ok	
2V 50485	GP12924-LB4	5X	MS26188	V8260TCLP	10/50			10	ok	ok per Owen flag 1,2 dichloroethane
2V 50486	JC63804-25L	NA	MS25705	V8260SL	5			11	ok	5uL ABK, C, E/100mL

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
2V 50487	B		NA			5			12	ok	
2V 50488	GP12870-LB2		5X	MS26143	V8260TCLP	10/50			13	ok	
2V 50489	JC65522-1A	5.3	5X	MS26143	V8260TCLP	10/50			14	ok	
2V 50490	JC65520-1A	5.3	5X	MS26143	V8260TCLP	10/50			15	ok	
2V 50491	JC65663-1A	3.1	5X	MS26188	V8260TCLP	10/50			16	ok	
2V 50492	JC65663-2A	3.1	5X	MS26188	V8260TCLP	10/50			17	RR	RR 5X matrix C/O
2V 50493	JC65676-1	2.1	5X	MS26188	V8260TCLP	10/50			18	ok	
2V 50494	JC65676-1MS	2.1	5X	MS26188	V8260TCLP	10/50			19	ok	50uL ABK, C, E/100mL (GP12924-LS3)
2V 50495	JC65676-1MSD	2.1	5X	MS26188	V8260TCLP	10/50			20	ok	50uL ABK, C, E/100mL
2V 50496	B		NA			5			21	ok	
2V 50497	JC65599-2	3.2	5X	MS26143	V8260TCLP	10/50			22	ok	
2V 50498	JC65676-2	2.1	5X	MS26188	V8260TCLP	10/50			23	ok	
2V 50499	JC65676-3	2.1	5X	MS26188	V8260TCLP	10/50			24	ok	
2V 50500	JC65676-4	2.1	5X	MS26188	V8260TCLP	10/50			25	ok	
2V 50501	JC65677-1	2.1	5X	MS26188	V8260TCLP	10/50			26	ok	(6.17 pm) 5/11/18.

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column		DB624(60m x 0.25mm x 1.4um)	
Standard	ABK V018-2615-136.16	C V018-2615-143.3	E V018-2615-121.62	13BTD V018-2615-14	Method	V8260C	
Standard Concentration	100-10,000ppm	100ppm	100ppm	100PPM	Init Calib Date	4/25/2018	
Internal Surrogate	V018-2615-113						
Internal Surrogate Concentration	250/2500ppm						
External Standard	ABK V018-2615-137.2	C V018-2615-141.7	E V018-2615-133.6		Analysis Date	4/25/2018	
External Standard Concentration	100-10,000PPM	100PPM	100PPM		Sequence loaded by	Hueanh Tran	
External Standard	Ext PA V018-2615-128	Ext Chlorodifluoromethane	V018-2615-132.1		Data processed by	Robert Szot	
External Standard Concentration	100/1000 FPM	100ppm			Batch ID	V4B3370	
Initial Calibration Method	M4B3370				Matrix	AQ	
pH Paper Lot#	216315				Approved By:	OWENM	
					Approved Date:	5/7/2018 1:36:55 PM	

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol(ml)	CL	pH	ALS #	Status	Comments
4b	81320	IB	NA		5			1	ok	
4b	81321	BFB	NA		5			2	ok	3:08pm
4b	81322	IC3370-0.2	NA	V8260C initial cal.	5			3	not used	1 ul abk,c,e,13btd /500ml
4b	81323	IC3370-0.5	NA	V8260C initial cal.	5			4	ok	2.5 ul abk,c,e,13btd /500ml
4b	81324	IC3370-1	NA	V8260C initial cal.	5			5	ok	1 ul abk,c,e,13btd /100ml
4b	81325	IC3370-2	NA	V8260C initial cal.	5			6	ok	2 ul abk,c,e,13btd /100ml
4b	81326	IC3370-5	NA	V8260C initial cal.	5			7	ok	5 ul abk,c,e,13btd /100ml
4b	81327	IC3370-10	NA	V8260C initial cal.	5			8	ok	10 ul abk,c,e,13btd /100ml
4b	81328	IC3370-20	NA	V8260C initial cal.	5			9	ok	10 ul abk,c,e,13btd /50ml
4b	81329	ICC3370-50	NA	V8260C initial cal.	5			10	ok	25 ul abk,c,e,13btd /50ml
4b	81330	IC3370-100	NA	V8260C initial cal.	5			11	ok	50 ul abk,c,e,13btd /50ml

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Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4b	81331	IC3370-200	NA	V8260C initial cal.	5			12	ok	100 ul abk,c,e,13bfd /50ml
4b	81332	B	NA		5			13	ok	
4b	81333	B	NA		5			14	ok	
4b	81334	ICV3370-50	NA	V8260C initial cal.	5			15	ok	25 ul ext abk,c,e, 13bfd/50ml
4b	81335	ICV3370-50	NA	V8260C initial cal.	5			16	ok	25 ul ext PA, chlorodifluromethane/ 50ml
4b	81336	B	NA		5			17	ok	

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column			
Standard	ABK V018-2615-136.16	C V018-2623-4.6	E V018-2615-121.62	Method		RXI624(60mx0.25mmx1.4um)	V8260C
Standard Concentration	100-10,000ppm	100ppm	100ppm	Init Calib Date			4/25/2018
Internal Surrogate	V018-2615-147			Rough reviewed by		Hueanh Tran (5/9/18)	
	250/2500ppm			Analysis Date			5/8/2018
				Sequence loaded by		Hueanh Tran	
				Data processed by		janellec	
				Batch ID		V4B3388	
				Matrix		AQ	
Initial Calibration Method	M4B3370			Approved By:		OWENM	
pH Paper Lot#	216315			Approved Date:		5/21/2018 11:39:43 AM	

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B 81664	BFB/CC3370-50	NA			5			1	ok/ok	25ul abk,c,e/50ml. 7:05pm
4B 81665	CC3370-01	NA			5			2	not need	1ul abk,c,e/100ml
4B 81666	BS	NA			5			3	ok	25ul abk,c,e/50ml
4B 81667	IB	NA			5			4	ok	
4B 81668	MB	NA			5			5	ok	
4B 81669	JC65632-13	4	NA	MS26139	V8260SL	5	1	6	ok	
4B 81670	JC65632-13MS	8	NA	MS26139	V8260SL	5	1	7	ok	20ul abk,c,e/40ml sample
4B 81671	JC65632-13MSD	1	NA	MS26139	V8260SL	5	1	8	ok	20ul abk,c,e/40ml sample
4B 81672	IB	1	NA	MS26139	V8260SL	5		9	ok	
4B 81673	JC65632-1	1	NA	MS26139	V8260SL	5	1	10	ok	
4B 81674	JC65632-2	1	NA	MS26139	V8260SL	5	1	11	ok	

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
4B 81675	JC65632-3	1	NA	MS26139	V8260SL	5		1	12	ok	
4B 81676	JC65632-4	1	NA	MS26139	V8260SL	5		1	13	ok	
4B 81677	JC65632-5	1	NA	MS26139	V8260SL	5		1	14	ok	
4B 81678	JC65632-6	1	NA	MS26139	V8260SL	5		1	15	ok	
4B 81679	JC65632-7	2	NA	MS26139	V8260SL	5		1	16	ok	
4B 81680	JC65632-8	2	NA	MS26139	V8260SL	5		1	17	ok	
4B 81681	JC65632-9	1	NA	MS26139	V8260SL	5		1	18	ok	
4B 81682	JC65632-10	1	NA	MS26139	V8260SL	5		1	19	ok	
4B 81683	JC65632-11	1	NA	MS26139	V8260SL	5		1	20	ok	
4B 81684	JC65632-12	1	NA	MS26139	V8260SL	5		1	21	ok	
4B 81685	JC65632-14	1	NA	MS26139	V8260SL	5		1	22	ok	
4B 81686	JC65632-15	1	NA	MS26139	V8260SL	5		1	23	ok	
4B 81687	JC65632-16	1	NA	MS26139	V8260SL	5		1	24	ok	5:49am

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column	
Standards	ABK V018-2615-89.55	C V018-2615-111.13	EK V018-2615-92.48	Method	ZB624(60mrx0.25mmx1.4um)
Standard Concentration	100ppm	100ppm	100ppm	Init Calib Date	V8260C 4/3/2018
External Standards	ABK V018-2615-114.4	C V018-2615-107.5	E V018-2615-115.3	PA V018-2615-85.3	
External Standard Concentration	100ppm	100ppm	100ppm	Analysis Date	4/3/2018
Internal Surrogate	V018-2615-97			Sequence loaded by	Eddie Huang
Internal Surrogate Concentration	50/500ppm			Data processed by	dongmei
				Batch ID	VA9165
				Matrix	AQ
Initial Calibration Method	MA9165			Approved By:	MOHUI
pH Paper Lot#	216315			Approved Date:	4/5/2018 7:03:18 PM
Data File		Bot #	Workgroup #	Purge Vol (ml)	ALS #
Sample ID	Bot #	Dil	Test	CL	pH #
A 240798	IB	NA		5	1
A 240799	IB	NA		5	2
A 240800	BFB	NA		5	3
A 240801	IC9165-0.2	NA	8260 initial cal	5	4
A 240802	IC9165-0.5	NA	8260 initial cal	5	5
A 240803	IC9165-1	NA	8260 initial cal	5	6
A 240804	IC9165-2	NA	8260 initial cal	5	7
A 240805	IC9165-5	NA	8260 initial cal	5	8
A 240806	IC9165-10	NA	8260 initial cal	5	9
A 240807	IC9165-20	NA	8260 initial cal	5	10
A 240808	ICC9165-50	NA	8260 initial cal	5	11
A 240809	IC9165-100	NA	8260 initial cal	5	12

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 240810	IC9165-200		NA		8260 initial cal	5			13	ok	200uLABK,C,EK/100mL.
A 240811	IB		NA			5			14		
A 240812	IB		NA			5			15		
A 240813	ICV9165-50		NA		8260 initial cal	5			16	ok	50uLExtABK,C,E/100mL.
A 240814	ICV9165-50		NA		8260 initial cal	5			17	ok	50uLExtPA/100mL.
A 240815	IB		NA			5			18		

GCMS Volatile Run Log

Standard / Reagents		Lot #	
JC6563-1-1	ABK V018-2615-136.6	C V018-2623-04.6	E V018-2623-03.7
Standard Concentration	100ppm	100ppm	100ppm
Internal Surrogate	V018-2615-149		
Internal Surrogate Concentration	50/1500ppm		
Rough Rview Completed	Jessica Potts 5/8/18.		
Initial Calibration Method	MA9165		
pH Paper Lot#	216315		

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments	
										Comments	Comments
A 241494	IB	NA			5			1	ok		
A 241495	CC9165-20	NA			5			2	ok\ok	20 uL abk,c,e/100mL 6:46am 5/8/18, # 11,13,14,16,19 HIGH.	
A 241496	BS	NA			5			3	ok	50uL abk,c,e/100mL	
A 241497	IB	NA			5			4	ok		
A 241498	MB	NA			5			5	ok		
A 241499	JC65633-9	3	NA	MS26140	V8260SL	5	1	6	ok		
A 241500	JC65633-9MS	4	NA	MS26140	V8260SL	5	1	7	ok	20uL abk,c,e/40mL RR	
A 241501	JC65633-9MSD	7	NA	MS26140	V8260SL	5	1	8	ok	20uL abk,c,e/40mL MSD NEEDS TO BE RERUN	
A 241502	IB	NA			5			9	ok		
A 241503	JC65633-1	1	NA	MS26140	V8260SL	5	1	10	ok		
A 241504	JC65633-2	2	10	MS26140	V8260SL	5/50	1	11	ok		

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 241505	JC65633-3	1	NA	MS26140	V8260SL	5		1	12	ok	
A 241506	JC65633-4	2	NA	MS26140	V8260SL	5		1	13	ok	
A 241507	JC65633-5	2	NA	MS26140	V8260SL	5		1	14	ok	
A 241508	JC65633-6	2	NA	MS26140	V8260SL	5		1	15	ok	
A 241509	JC65633-7	1	NA	MS26140	V8260SL	5		1	16	ok	
A 241510	JC65633-8	1	NA	MS26140	V8260SL	5		1	17	ok	
A 241511	JC65633-10	1	NA	MS26140	V8260SL	5		1	18	ok	
A 241512	JC65633-11	2	NA	MS26140	V8260SL	5		1	19	ok	
A 241513	JC65633-12	1	NA	MS26140	V8260SL	5		1	20	ok	
A 241514	JC65632-17	2	NA	MS26140	V8260SL	5		1	21	RR	CC (VC) hit
A 241515	JC65632-18	2	NA	MS26140	V8260SL	5		1	22	RR	CC (VC) hit
A 241516	JC65632-19	2	NA	MS26140	V8260SL	5		1	23	ok	(6:17 PM) 5/8/18.

GCMS Volatile Run Log

Standard / Reagents		Lot #			
Standards	ABK V018-2623-05.11	C V018-2623-10.3	E V018-2623-03.7	Method	RX1624 (60m x 0.25mm x 1.4um)
Standard Concentration	100-10,000PPM	100PPM	100PPM	Init Calib Date	V8260C 4/13/2018
Internal Surrogate	V018-2615-149			Rough reviewed by	Eddie Huang (5/10/18)
Internal Surrogate Concentration	250/2500 ppm			Analysis Date	5/10/2018
				Sequence loaded by	Oyinadei
				Data processed by	kenrickb
				Batch ID	VA9206
				Matrix	AQ
Initial Cal. Method	MA9165			Approved By:	OWENM
pH Paper Lot#	216316			Approved Date:	5/21/2018 11:40:00 AM

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments	
											Comments	
A 241541	IB		NA			5			1	ok		
A 241542	CC9165-20		NA			5			2	NG	20uL abk,c,e/100mL Failed high.	
A 241543	CC9165-20		NA			5			3	NG	20uL abk,c,e/100mL Failed low.	
A 241544	BFB/C/C9165-20		NA			5			4	ok/ok	20uL abk,c,e/100mL. 8:31am, 5/10/18. #7,11,13,14,16,19 high	
A 241545	CC9165-20		NA			5			5	ok	20uL abk,c,e/100mL. #7,11,13,14,16,18, 19 high.	
A 241546	BS		NA			5			6	ok	50uL abk,c,e/100mL.	
A 241547	IB		NA			5			7	ok		
A 241548	MB		NA			5			8	ok		
A 241549	JC65633-9MS	2	NA	MS26140	V8260SL	5		1	9	ok	20uL abk,c,e/40mL. VA9204.	
A 241550	JC65633-9MSD	6	NA	MS26140	V8260SL	5		1	10	ok	20uL abk,c,e/40mL. VA9204.	
A 241551	IB		NA			5			11	ok		

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status					Comments
A	JC63604-26	NA	MS25705	V8260SL	5				12	ok	5uLABK,C,E/100mL_5ppb MDLV_12:57pm_5/10/18.				

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The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60562097

SGS Job Number: JC65633

Sampling Dates: 05/02/18 - 05/03/18



Report to:

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Warrenville, IL 60555
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ATTN: Peter Hollatz

Total number of pages in report: 192



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

**Nancy Cole
Laboratory Director**

Client Service contact: Diane Komar 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Sample Summary

United Technologies Corporation

Job No: JC65633ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID	
JC65633-1	05/02/18	08:45 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW08-050218
JC65633-2	05/02/18	10:10 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW07-050218
JC65633-3	05/02/18	11:10 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW06-050218
JC65633-4	05/02/18	12:50 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW05-050218
JC65633-5	05/02/18	13:10 AH	05/07/18	AQ	Equipment Blank	HSSEN-EBLK02-050218
JC65633-6	05/02/18	13:50 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW04-050218
JC65633-7	05/02/18	15:00 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW03-050218
JC65633-8	05/02/18	00:00 AH	05/07/18	AQ	Ground Water	HSSEN-DUP02-050218
JC65633-9	05/03/18	08:55 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW02-050318
JC65633-9D	05/03/18	08:55 AH	05/07/18	AQ	Water Dup/MSD	HSSEN-MSD02-050318
JC65633-9S	05/03/18	08:55 AH	05/07/18	AQ	Water Matrix Spike	HSSEN-MS02-050318
JC65633-10	05/03/18	09:15 AH	05/07/18	AQ	Field Blank Water	HSSEN-FBLK02-050318
JC65633-11	05/03/18	10:15 AH	05/07/18	AQ	Ground Water	HSSEN-RAMW01-050318

Sample Summary

(continued)

United Technologies Corporation

Job No: JC65633

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
JC65633-12	05/03/18	10:15 AH	05/07/18	AQ Trip Blank Water	HSSER-TRIP02-050118

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: United Technologies Corporation **Job No** JC65633
Site: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL **Report Date** 5/21/2018 11:08:55 A

On 05/07/2018, 10 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 5.3 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC65633 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ	Batch ID: VA9204
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- All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JC65633-9MS, JC65633-9MSD were used as the QC samples indicated.

- JC65633-9 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-1 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-2 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-3 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-4 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-5 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-6 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-7 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-8 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-10 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-11 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.
- JC65633-12 for Vinyl chloride: Associated CCV outside of control limits high, sample was ND.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC65633

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 05/02/18 thru 05/03/18

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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JC65633-1 HSSER-RAMW08-050218

No hits reported in this sample.

JC65633-2 HSSER-RAMW07-050218

1,1-Dichloroethane	0.0270	0.010	0.0021	mg/l	SW846 8260C
1,1-Dichloroethene	0.0167	0.010	0.0047	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0104	0.010	0.0050	mg/l	SW846 8260C
Ethylbenzene	0.0076 J	0.010	0.0022	mg/l	SW846 8260C
1,1,1-Trichloroethane	1.86	0.010	0.0025	mg/l	SW846 8260C

JC65633-3 HSSER-RAMW06-050218

1,1-Dichloroethane	0.0031	0.0010	0.00021	mg/l	SW846 8260C
1,1-Dichloroethene	0.00059 J	0.0010	0.00047	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.0035	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0757	0.0010	0.00025	mg/l	SW846 8260C

JC65633-4 HSSER-RAMW05-050218

1,1-Dichloroethane	0.00058 J	0.0010	0.00021	mg/l	SW846 8260C
cis-1,2-Dichloroethene	0.00083 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0123	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.00061 J	0.0010	0.00027	mg/l	SW846 8260C

JC65633-5 HSSER-EBLK02-050218

No hits reported in this sample.

JC65633-6 HSSER-RAMW04-050218

1,1-Dichloroethane	0.00021 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.00051 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00031 J	0.0010	0.00025	mg/l	SW846 8260C

JC65633-7 HSSER-RAMW03-050218

1,1-Dichloroethane	0.00049 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.00059 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00032 J	0.0010	0.00025	mg/l	SW846 8260C

JC65633-8 HSSER-DUP02-050218

1,1-Dichloroethane	0.00043 J	0.0010	0.00021	mg/l	SW846 8260C
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Summary of Hits

Page 2 of 2

Job Number: JC65633

Account: United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Collected: 05/02/18 thru 05/03/18

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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Tetrachloroethene	0.00054 J	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00031 J	0.0010	0.00025	mg/l	SW846 8260C

JC65633-9 HSSER-RAMW02-050318

1,1-Dichloroethane	0.00072 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.0011	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.00054 J	0.0010	0.00025	mg/l	SW846 8260C

JC65633-10 HSSER-FBLK02-050318

No hits reported in this sample.

JC65633-11 HSSER-RAMW01-050318

1,1-Dichloroethane	0.00061 J	0.0010	0.00021	mg/l	SW846 8260C
Tetrachloroethene	0.0022	0.0010	0.00050	mg/l	SW846 8260C
1,1,1-Trichloroethane	0.0010	0.0010	0.00025	mg/l	SW846 8260C
Trichloroethene	0.00047 J	0.0010	0.00027	mg/l	SW846 8260C

JC65633-12 HSSER-TRIP02-050118

No hits reported in this sample.

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

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Client Sample ID: HSSER-RAMW08-050218**Lab Sample ID:** JC65633-1**Date Sampled:** 05/02/18**Matrix:** AQ - Ground Water**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241503.D	1	05/08/18 11:58	OI	n/a	n/a	VA9204
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	91%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

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SGS North America Inc.

Report of Analysis

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4.2
4

Client Sample ID:	HSSER-RAMW07-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65633-2	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241504.D	10	05/08/18 12:27	OI	n/a	n/a	VA9204
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0270	0.010	0.0021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.010	0.0020	mg/l	
75-35-4	1,1-Dichloroethene	0.0167	0.010	0.0047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.0104	0.010	0.0050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.010	0.0040	mg/l	
100-41-4	Ethylbenzene	0.0076	0.010	0.0022	mg/l	J
75-09-2	Methylene chloride	ND	0.020	0.010	mg/l	
127-18-4	Tetrachloroethene	ND	0.010	0.0050	mg/l	
108-88-3	Toluene	ND	0.010	0.0025	mg/l	
71-55-6	1,1,1-Trichloroethane	1.86	0.010	0.0025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.010	0.0024	mg/l	
79-01-6	Trichloroethene	ND	0.010	0.0027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.010	0.0062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	92%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

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Client Sample ID:	HSSER-RAMW06-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65633-3	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241505.D	1	05/08/18 12:56	OI	n/a	n/a	VA9204
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.0031	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	0.00059	0.0010	0.00047	mg/l	J
156-59-2	cis-1,2-Dichloroethene	0.0035	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0757	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	91%		80-120%
460-00-4	4-Bromofluorobenzene	90%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-RAMW05-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65633-4	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241506.D	1	05/08/18 13:25	OI	n/a	n/a	VA9204
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00058	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	0.00083	0.0010	0.00050	mg/l	J
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0123	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00061	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	99%		81-124%
2037-26-5	Toluene-D8	92%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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SGS North America Inc.

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Client Sample ID: HSSER-EBLK02-050218**Lab Sample ID:** JC65633-5**Date Sampled:** 05/02/18**Matrix:** AQ - Equipment Blank**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241507.D	1	05/08/18 13:54	OI	n/a	n/a	VA9204
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	95%		81-124%
2037-26-5	Toluene-D8	89%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

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Client Sample ID:	HSSER-RAMW04-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65633-6	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241508.D	1	05/08/18 14:23	OI	n/a	n/a	VA9204
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00021	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00051	0.0010	0.00050	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00031	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	90%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-RAMW03-050218	Date Sampled:	05/02/18
Lab Sample ID:	JC65633-7	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241509.D	1	05/08/18 14:52	OI	n/a	n/a	VA9204
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00049	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00059	0.0010	0.00050	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00032	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		81-124%
2037-26-5	Toluene-D8	90%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID: HSSER-DUP02-050218**Lab Sample ID:** JC65633-8**Date Sampled:** 05/02/18**Matrix:** AQ - Ground Water**Date Received:** 05/07/18**Method:** SW846 8260C**Percent Solids:** n/a**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241510.D	1	05/08/18 15:21	OI	n/a	n/a	VA9204
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00043	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.00054	0.0010	0.00050	mg/l	J
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00031	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	89%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-RAMW02-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65633-9	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241499.D	1	05/08/18 09:56	OI	n/a	n/a	VA9204
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00072	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0011	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.00054	0.0010	0.00025	mg/l	J
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		81-124%
2037-26-5	Toluene-D8	91%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

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Client Sample ID:	HSSER-FBLK02-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65633-10	Date Received:	05/07/18
Matrix:	AQ - Field Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241511.D	1	05/08/18 15:51	OI	n/a	n/a	VA9204
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		81-124%
2037-26-5	Toluene-D8	91%		80-120%
460-00-4	4-Bromofluorobenzene	91%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	HSSER-RAMW01-050318	Date Sampled:	05/03/18
Lab Sample ID:	JC65633-11	Date Received:	05/07/18
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241512.D	1	05/08/18 16:20	OI	n/a	n/a	VA9204
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	0.00061	0.0010	0.00021	mg/l	J
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	0.0022	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	0.0010	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	0.00047	0.0010	0.00027	mg/l	J
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		81-124%
2037-26-5	Toluene-D8	90%		80-120%
460-00-4	4-Bromofluorobenzene	92%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Report of Analysis

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4.12
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Client Sample ID:	HSSER-TRIP02-050118	Date Sampled:	05/03/18
Lab Sample ID:	JC65633-12	Date Received:	05/07/18
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260C		
Project:	ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	A241513.D	1	05/08/18 16:49	OI	n/a	n/a	VA9204
Run #2							

Purge Volume	
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	0.0010	0.00021	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0010	0.00020	mg/l	
75-35-4	1,1-Dichloroethene	ND	0.0010	0.00047	mg/l	
156-59-2	cis-1,2-Dichloroethene	ND	0.0010	0.00050	mg/l	
156-60-5	trans-1,2-Dichloroethene	ND	0.0010	0.00040	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00022	mg/l	
75-09-2	Methylene chloride	ND	0.0020	0.0010	mg/l	
127-18-4	Tetrachloroethene	ND	0.0010	0.00050	mg/l	
108-88-3	Toluene	ND	0.0010	0.00025	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0010	0.00025	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0010	0.00024	mg/l	
79-01-6	Trichloroethene	ND	0.0010	0.00027	mg/l	
75-01-4	Vinyl chloride ^a	ND	0.0010	0.00062	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
17060-07-0	1,2-Dichloroethane-D4	98%		81-124%
2037-26-5	Toluene-D8	90%		80-120%
460-00-4	4-Bromofluorobenzene	93%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Misc. Forms**5****Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

6W
WFB
WTB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

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FED-EX Tracking # 4357 6345 2410 Bottle Order Control # JK-042318-10b
SGS Quote # JC65633 SGS Job # JC65633

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes			
Company Name <u>AECOM</u>	Project Name: <u>UTAS PLANTS 1/2 FACILITY</u>	Street Address <u>4320 WINFIELD RD # 300</u>	Street <u>VALMORIENVILLE IL 60555</u>	Billing Information (If different from Report to)													
City <u>Valmorienville</u> State <u>IL</u> Zip <u>60555</u>	City <u>ROCKFORD</u> State <u>IL</u>	Company Name															
Project Contact <u>Peter Hollatz</u> E-mail <u>peter.hollatz@aecom.com</u>	Project # <u>60562097</u>	Street Address															
Phone # <u>(608) 243-0000</u> Fax # <u>(608) 243-0000</u>	Client Purchase Order #	City <u>ROCKFORD</u> State <u>IL</u> Zip <u>60555</u>															
Sampler(s) Name(s) <u>N. PINS / A. HOLLATZ</u>	Phone # <u>(608) 243-0000</u>	Project Manager <u>PETER HOLLATZ</u>	Attention:														
		Collection												Number of preserved bottles			
Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HG	NH4I	NH4O	H2SO4	NONE	DI Water	MEOH	ENCORE	VCC's	
1	HSSER2-RAMW08-050218		5/2/18	0845	A/H	GW	3	3								X	
2	HSSER2-RAMW07-050218		5/2/18	1010	A/H	GW	3	3								X	
3	HSSER2-RAMW06-050218		5/2/18	1110	A/H	GW	3	3								X	
4	HSSER2-RAMW05-050218		5/2/18	1250	A/H	GW	3	3								X	
5	HSSER2-EBLK02-050218		5/2/18	1310	A/H	GW	3	3								X	
6	HSSER2-RAMW04-050218		5/2/18	1350	A/H	GW	3	3								X	
7	HSSER2-RAMW03-050218		5/2/18	1500	A/H	GW	3	3								X	
8	HSSER2-DUP02-050218		5/2/18	0000	A/H	GW	3	3								X	
9	HSSER2-RAMW02-050318		5/3/18	0855	A/H	GW	3	3								X	
10	HSSER2-MS02-LSC0318		5/3/18	0855	A/H	GW	3	3								X	
11	HSSER2-MS02R-050318		5/3/18	0955	A/H	GW	3	3								X	
Turnaround Time (Business days)		Data Deliverable Information												Comments / Special Instructions			
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: _____												<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULL1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format _____ <input type="checkbox"/> Other _____ <small>NJ Data of Known Quality Protocol Reporting</small> Commercial "A" = Results Only; Commercial "B" = Results + QC Summary <small>NJ Reduced = Results + QC Summary + Partial Raw data</small>			
Emergency & Rush T/A data available via LabLink														* LIST OF 13 VCC's IV QC			
Sample Custody must be documented below each time samples change possession, including courier delivery.														Sample inventory is verified upon receipt in the Laboratory			
1	N.L.P (AECOM)	Date Time: 5/3/18 13:15	Received By: 1 FedEx	Relinquished By: 2 FedEx	Date Time: 5/3/18 13:15	Received By: 2	Relinquished By: 3 FedEx	Date Time: 5/3/18 13:15	Received By: 3	Relinquished By: 4 FedEx	Date Time: 5/3/18 13:15	Received By: 4	On Ice	Cooler Temp: 38			
2																	
3																	
4																	
5																	

Form:SM088-03C (revised 2/12/18)

<http://www.sgs.com/en/terms-and-conditions>

JC65633: Chain of Custody
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CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

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Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)		Matrix Codes		
Company Name AECOM		Project Name: UTAS PLANTS 1/2 FACILITY						
Street Address 4320 WINFIELD RD # 300		Street						
City WADENRENNILLE IL	State 60555	City ROCKFORD IL	State	Billing Information (if different from Report to)				
Project Contact PETER HALLATZ/peter.hallatz@aecom.com		Project # 60562097		Company Name				
Phone # 		Fax # 		Street Address				
Sampler(s) Name N. PINS A. HALLATZ		Client Purchase Order # 		City State Zip				
Project Manager PETER HALLATZ		Attention: 						
Lab Sample #	Collection							VOCs
	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	
10	HSSER-FBLK02-050318	5/3/18	0915	AH	GW	3	3	X
11	HSSER-RAMW01-050318	5/3/18	1015	AH	GW	3	3	X
12	HSSER-TRIP02-050118	5/1/18	-	-	GW	2	2	X
Turnaround Time (Business days)		Data Deliverable Information					Comments / Special Instructions	
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: <hr/> <hr/> <hr/> <hr/> <hr/>					<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____ * LIST OF 13 VOCs IV QC	
Emergency & Rush T/A data available via LabLink		NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only; Commercial "B" = Results + QC Summary Commercial "C" = Results + QC Summary + Partial Raw data NJ Reduced = Results + QC Summary + Partial Raw data					Sample inventory is verified upon receipt in the Laboratory	
Sample Custody must be documented below each time samples change possession, including courier delivery.								
Relinquished by Sampler: 1 NICK I (AECOM)	Date Time: 5/3/18 1315	Received By: 1	Feder		Relinquished By: 2	Date Time: 5/3/18 9:30	Received By: 2	
Relinquished by Sampler: 3	Date Time:	Received By: 3			Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5			Custody Seal #	Intact <input type="checkbox"/> Not intact <input type="checkbox"/>	Preserved where applicable <input type="checkbox"/>	
						On Ice <input type="checkbox"/>	Cooler Temp. 3.8	

Form:SM088-03C (revised 2/12/18)

<http://www.sgs.com/en/terms-and-conditions>

JC65633: Chain of Custody

SGS Sample Receipt Summary

Job Number: JC65633 Client: AECOM, INC. Project: ENSRILW: UTAS PLANTS 1/2 FACILITY, ROCKF
 Date / Time Received: 5/7/2018 9:30:00 AM Delivery Method: Airbill #'s:

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8);

Cooler Temps (Corrected) °C: Cooler 1: (5.3);

Cooler Security	Y or N	Y or N	Sample Integrity - Documentation	Y or N
1. Custody Seals Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Sample labels present on bottles:	<input checked="" type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Container labeling complete:	<input checked="" type="checkbox"/>
3. COC Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Sample container label / COC agree:	<input checked="" type="checkbox"/>
4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Cooler Temperature		Y or N	Sample Integrity - Condition	
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		1. Sample rcvd within HT:	<input checked="" type="checkbox"/>
2. Cooler temp verification:	IR Gun		2. All containers accounted for:	<input checked="" type="checkbox"/>
3. Cooler media:	Ice (Bag)		3. Condition of sample:	Intact
4. No. Coolers:	1			
Quality Control Preservation		Y or N	Sample Integrity - Instructions	Y or N
1. Trip Blank present / cooler:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Analysis requested is clear:	<input checked="" type="checkbox"/>
2. Trip Blank listed on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Bottles received for unspecified tests	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. Sufficient volume rcvd for analysis:	<input checked="" type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4. Compositing instructions clear:	<input type="checkbox"/>
			5. Filtering instructions clear:	<input type="checkbox"/>
				<input checked="" type="checkbox"/>

Test Strip Lot #: pH 1-12: 216017 pH 12+: 208717 Other: (Specify) _____

Comments

SM089-03
 Rev. Date 12/7/17

JC65633: Chain of Custody

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5.1

5

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JC65633

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC65633-1	Collected: 02-MAY-18 08:45 By: AH HSSER-RAMW08-050218			Received: 07-MAY-18 By: DG		
JC65633-1	SW846 8260C	08-MAY-18 11:58	OI			V8260SL
JC65633-2	Collected: 02-MAY-18 10:10 By: AH HSSER-RAMW07-050218			Received: 07-MAY-18 By: DG		
JC65633-2	SW846 8260C	08-MAY-18 12:27	OI			V8260SL
JC65633-3	Collected: 02-MAY-18 11:10 By: AH HSSER-RAMW06-050218			Received: 07-MAY-18 By: DG		
JC65633-3	SW846 8260C	08-MAY-18 12:56	OI			V8260SL
JC65633-4	Collected: 02-MAY-18 12:50 By: AH HSSER-RAMW05-050218			Received: 07-MAY-18 By: DG		
JC65633-4	SW846 8260C	08-MAY-18 13:25	OI			V8260SL
JC65633-5	Collected: 02-MAY-18 13:10 By: AH HSSER-EBLK02-050218			Received: 07-MAY-18 By: DG		
JC65633-5	SW846 8260C	08-MAY-18 13:54	OI			V8260SL
JC65633-6	Collected: 02-MAY-18 13:50 By: AH HSSER-RAMW04-050218			Received: 07-MAY-18 By: DG		
JC65633-6	SW846 8260C	08-MAY-18 14:23	OI			V8260SL
JC65633-7	Collected: 02-MAY-18 15:00 By: AH HSSER-RAMW03-050218			Received: 07-MAY-18 By: DG		
JC65633-7	SW846 8260C	08-MAY-18 14:52	OI			V8260SL
JC65633-8	Collected: 02-MAY-18 00:00 By: AH HSSER-DUP02-050218			Received: 07-MAY-18 By: DG		
JC65633-8	SW846 8260C	08-MAY-18 15:21	OI			V8260SL

Internal Sample Tracking Chronicle

United Technologies Corporation

Job No: JC65633

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60562097

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JC65633-9	HSSEN-RAMW02-050318	Collected: 03-MAY-18 08:55	By: AH	Received: 07-MAY-18	By: DG	
JC65633-9	SW846 8260C	08-MAY-18 09:56	OI			V8260SL
JC65633-10	HSSEN-FBLK02-050318	Collected: 03-MAY-18 09:15	By: AH	Received: 07-MAY-18	By: DG	
JC65633-10	SW846 8260C	08-MAY-18 15:51	OI			V8260SL
JC65633-11	HSSEN-RAMW01-050318	Collected: 03-MAY-18 10:15	By: AH	Received: 07-MAY-18	By: DG	
JC65633-11	SW846 8260C	08-MAY-18 16:20	OI			V8260SL
JC65633-12	HSSEN-TRIP02-050118	Collected: 03-MAY-18 10:15	By: AH	Received: 07-MAY-18	By: DG	
JC65633-12	SW846 8260C	08-MAY-18 16:49	OI			V8260SL

SGS Internal Chain of Custody

Page 1 of 3

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

5.3

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65633-1.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-1.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-1.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-1.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-1.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-1.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-2.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-2.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-2.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-2.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-2.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-2.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-3.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-3.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-3.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-3.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-3.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-3.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-4.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-4.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-4.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-4.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-4.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-4.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-5.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-5.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-5.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-5.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-5.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-5.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-6.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-6.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-6.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-6.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-6.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-6.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-7.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-7.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage

SGS Internal Chain of Custody

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Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

5.3

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65633-7.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-7.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-7.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-7.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-8.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-8.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-8.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-8.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-8.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-8.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-9.2	Secured Storage	Oyinade Ifaturoti	05/10/18 07:25	Retrieve from Storage
JC65633-9.2	Oyinade Ifaturoti	GCMSA	05/10/18 07:25	Load on Instrument
JC65633-9.2	GCMSA	Oyinade Ifaturoti	05/14/18 08:01	Unload from Instrument
JC65633-9.2	Oyinade Ifaturoti	Secured Storage	05/14/18 08:01	Return to Storage
JC65633-9.3	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-9.3	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-9.3	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-9.3	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-9.3	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-9.3	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-9.4	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-9.4	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-9.4	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-9.4	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-9.4	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-9.4	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-9.6	Secured Storage	Oyinade Ifaturoti	05/10/18 07:25	Retrieve from Storage
JC65633-9.6	Oyinade Ifaturoti	GCMSA	05/10/18 07:25	Load on Instrument
JC65633-9.6	GCMSA	Oyinade Ifaturoti	05/14/18 08:01	Unload from Instrument
JC65633-9.6	Oyinade Ifaturoti	Secured Storage	05/14/18 08:01	Return to Storage
JC65633-9.7	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-9.7	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-9.7	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-9.7	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-9.7	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-9.7	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-10.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage

SGS Internal Chain of Custody

Page 3 of 3

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Received: 05/07/18

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5.3

Sample/Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JC65633-10.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-10.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-10.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-10.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-10.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-11.2	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-11.2	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-11.2	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-11.2	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-11.2	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-11.2	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage
JC65633-12.1	Secured Storage	Oyinade Ifaturoti	05/08/18 06:20	Retrieve from Storage
JC65633-12.1	Oyinade Ifaturoti	VOA Prep Storage	05/08/18 06:20	Return to Storage
JC65633-12.1	VOA Prep Storage	Oyinade Ifaturoti	05/08/18 09:36	Retrieve from Storage
JC65633-12.1	Oyinade Ifaturoti	GCMSA	05/08/18 09:36	Load on Instrument
JC65633-12.1	GCMSA	Jessica Potts	05/09/18 11:44	Unload from Instrument
JC65633-12.1	Jessica Potts	Secured Storage	05/09/18 11:44	Return to Storage

MS Volatiles**QC Data Summaries**

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries



Method Blank Summary

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-MB	A241498.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:**Method: SW846 8260C**

JC65633-1, JC65633-2, JC65633-3, JC65633-4, JC65633-5, JC65633-6, JC65633-7, JC65633-8, JC65633-9, JC65633-10, JC65633-11, JC65633-12

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.31	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	98%
17060-07-0	1,2-Dichloroethane-D4	95%
2037-26-5	Toluene-D8	90%
460-00-4	4-Bromofluorobenzene	93%

Method Blank Summary

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-MB2	A241548.D	1	05/10/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65633-9MS, JC65633-9MSD

6.1.2
6

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.47	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.22	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.31	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.24	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.27	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.62	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101%
17060-07-0	1,2-Dichloroethane-D4	99%
2037-26-5	Toluene-D8	92%
460-00-4	4-Bromofluorobenzene	93%

Blank Spike Summary

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VA9204-BS	A241496.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:**Method:** SW846 8260C

JC65633-1, JC65633-2, JC65633-3, JC65633-4, JC65633-5, JC65633-6, JC65633-7, JC65633-8, JC65633-9, JC65633-10, JC65633-11, JC65633-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	50	46.2	92	72-124
107-06-2	1,2-Dichloroethane	50	47.2	94	66-150
75-35-4	1,1-Dichloroethene	50	52.4	105	61-132
156-59-2	cis-1,2-Dichloroethene	50	50.1	100	71-119
156-60-5	trans-1,2-Dichloroethene	50	50.7	101	71-123
100-41-4	Ethylbenzene	50	48.0	96	77-124
75-09-2	Methylene chloride	50	53.5	107	69-122
127-18-4	Tetrachloroethene	50	48.8	98	70-136
108-88-3	Toluene	50	43.8	88	76-126
71-55-6	1,1,1-Trichloroethane	50	56.6	113	77-136
79-00-5	1,1,2-Trichloroethane	50	48.5	97	75-123
79-01-6	Trichloroethene	50	49.6	99	79-126
75-01-4	Vinyl chloride	50	60.7	121	56-146

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	76-120%
17060-07-0	1,2-Dichloroethane-D4	94%	64-135%
2037-26-5	Toluene-D8	91%	76-117%
460-00-4	4-Bromofluorobenzene	96%	72-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JC65633-9MS	A241549.D	1	05/10/18	OI	n/a	n/a	VA9204
JC65633-9MSD	A241550.D	1	05/10/18	OI	n/a	n/a	VA9204
JC65633-9	A241499.D	1	05/08/18	OI	n/a	n/a	VA9204

The QC reported here applies to the following samples:

Method: SW846 8260C

JC65633-1, JC65633-2, JC65633-3, JC65633-4, JC65633-5, JC65633-6, JC65633-7, JC65633-8, JC65633-9, JC65633-10, JC65633-11, JC65633-12

CAS No.	Compound	JC65633-9		Spike	MS	MS	Spike	MSD	MSD	RPD	Limits Rec/RPD
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l	%		
75-34-3	1,1-Dichloroethane	0.72	J	50	42.1	83	50	43.6	86	4	73-126/11
107-06-2	1,2-Dichloroethane	ND		50	42.2	84	50	43.7	87	3	72-131/11
75-35-4	1,1-Dichloroethene	ND		50	48.1	96	50	49.0	98	2	63-136/14
156-59-2	cis-1,2-Dichloroethene	ND		50	45.9	92	50	47.1	94	3	60-136/11
156-60-5	trans-1,2-Dichloroethene	ND		50	47.1	94	50	47.5	95	1	70-126/11
100-41-4	Ethylbenzene	ND		50	48.9	98	50	49.5	99	1	51-140/20
75-09-2	Methylene chloride	ND		50	44.8	90	50	46.1	92	3	73-125/13
127-18-4	Tetrachloroethene	1.1		50	50.2	98	50	51.2	100	2	61-139/11
108-88-3	Toluene	ND		50	43.5	87	50	44.6	89	2	60-135/10
71-55-6	1,1,1-Trichloroethane	0.54	J	50	52.0	103	50	53.0	105	2	74-138/12
79-00-5	1,1,2-Trichloroethane	ND		50	43.5	87	50	43.9	88	1	78-121/11
79-01-6	Trichloroethene	ND		50	48.5	97	50	49.5	99	2	62-141/10
75-01-4	Vinyl chloride	ND		50	57.2	114	50	55.9	112	2	43-146/15

CAS No.	Surrogate Recoveries	MS	MSD	JC65633-9	Limits
1868-53-7	Dibromofluoromethane	100%	102%	100%	80-120%
17060-07-0	1,2-Dichloroethane-D4	94%	96%	96%	81-124%
2037-26-5	Toluene-D8	94%	94%	91%	80-120%
460-00-4	4-Bromofluorobenzene	96%	97%	91%	80-120%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9165-BFB	Injection Date:	04/03/18
Lab File ID:	A240801.D	Injection Time:	17:23
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	10680	17.4	Pass
75	30.0 - 60.0% of mass 95	27821	45.2	Pass
95	Base peak, 100% relative abundance	61501	100.0	Pass
96	5.0 - 9.0% of mass 95	4068	6.61	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	51685	84.0	Pass
175	5.0 - 9.0% of mass 174	4265	6.93	(8.25) ^a Pass
176	95.0 - 101.0% of mass 174	50666	82.4	(98.0) ^a Pass
177	5.0 - 9.0% of mass 176	3509	5.71	(6.93) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9165-IC9165	A240802.D	04/03/18	17:52	00:29	Initial cal 0.2
VA9165-IC9165	A240803.D	04/03/18	18:21	00:58	Initial cal 0.5
VA9165-IC9165	A240804.D	04/03/18	18:50	01:27	Initial cal 1
VA9165-IC9165	A240805.D	04/03/18	19:19	01:56	Initial cal 2
VA9165-IC9165	A240806.D	04/03/18	19:48	02:25	Initial cal 5
VA9165-IC9165	A240807.D	04/03/18	20:17	02:54	Initial cal 10
VA9165-IC9165	A240808.D	04/03/18	20:46	03:23	Initial cal 20
VA9165-ICC9165	A240809.D	04/03/18	21:15	03:52	Initial cal 50
VA9165-IC9165	A240810.D	04/03/18	21:44	04:21	Initial cal 100
VA9165-IC9165	A240811.D	04/03/18	22:13	04:50	Initial cal 200
VA9165-ICV9165	A240814.D	04/03/18	23:40	06:17	Initial cal verification 50
VA9165-ICV9165	A240815.D	04/04/18	00:09	06:46	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9204-BFB	Injection Date:	05/08/18
Lab File ID:	A241495.D	Injection Time:	06:46
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	13507	15.9	Pass
75	30.0 - 60.0% of mass 95	37472	44.0	Pass
95	Base peak, 100% relative abundance	85083	100.0	Pass
96	5.0 - 9.0% of mass 95	5590	6.57	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	77392	91.0	Pass
175	5.0 - 9.0% of mass 174	6183	7.27	(7.99) ^a Pass
176	95.0 - 101.0% of mass 174	75331	88.5	(97.3) ^a Pass
177	5.0 - 9.0% of mass 176	4926	5.79	(6.54) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9204-CC9165	A241495.D	05/08/18	06:46	00:00	Continuing cal 20
VA9204-BS	A241496.D	05/08/18	07:50	01:04	Blank Spike
VA9204-MB	A241498.D	05/08/18	09:08	02:22	Method Blank
JC65633-9	A241499.D	05/08/18	09:56	03:10	HSSER-RAMW02-050318
JC65633-1	A241503.D	05/08/18	11:58	05:12	HSSER-RAMW08-050218
JC65633-2	A241504.D	05/08/18	12:27	05:41	HSSER-RAMW07-050218
JC65633-3	A241505.D	05/08/18	12:56	06:10	HSSER-RAMW06-050218
JC65633-4	A241506.D	05/08/18	13:25	06:39	HSSER-RAMW05-050218
JC65633-5	A241507.D	05/08/18	13:54	07:08	HSSER-EBLK02-050218
JC65633-6	A241508.D	05/08/18	14:23	07:37	HSSER-RAMW04-050218
JC65633-7	A241509.D	05/08/18	14:52	08:06	HSSER-RAMW03-050218
JC65633-8	A241510.D	05/08/18	15:21	08:35	HSSER-DUP02-050218
JC65633-10	A241511.D	05/08/18	15:51	09:05	HSSER-FBLK02-050318
JC65633-11	A241512.D	05/08/18	16:20	09:34	HSSER-RAMW01-050318
JC65633-12	A241513.D	05/08/18	16:49	10:03	HSSER-TRIP02-050118
ZZZZZZ	A241514.D	05/08/18	17:18	10:32	(unrelated sample)
ZZZZZZ	A241515.D	05/08/18	17:47	11:01	(unrelated sample)
ZZZZZZ	A241516.D	05/08/18	18:17	11:31	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Sample:	VA9206-BFB	Injection Date:	05/10/18
Lab File ID:	A241544.D	Injection Time:	08:31
Instrument ID:	GCMSA		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	14.95 - 40.0% of mass 95	8686	17.1	Pass
75	30.0 - 60.0% of mass 95	22573	44.5	Pass
95	Base peak, 100% relative abundance	50707	100.0	Pass
96	5.0 - 9.0% of mass 95	3456	6.82	Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) ^a Pass
174	50.0 - 120.0% of mass 95	45787	90.3	Pass
175	5.0 - 9.0% of mass 174	3648	7.19	(7.97) ^a Pass
176	95.0 - 101.0% of mass 174	45072	88.9	(98.4) ^a Pass
177	5.0 - 9.0% of mass 176	2908	5.73	(6.45) ^b Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VA9206-CC9165	A241545.D	05/10/18	09:12	00:41	Continuing cal 20
VA9206-BS	A241546.D	05/10/18	09:55	01:24	Blank Spike
VA9204-BS2	A241546.D	05/10/18	09:55	01:24	Blank Spike
VA9206-MB	A241548.D	05/10/18	10:54	02:23	Method Blank
VA9204-MB2	A241548.D	05/10/18	10:54	02:23	Method Blank
JC65633-9MS	A241549.D	05/10/18	11:30	02:59	Matrix Spike
JC65633-9MSD	A241550.D	05/10/18	11:59	03:28	Matrix Spike Duplicate
ZZZZZZ	A241552.D	05/10/18	12:57	04:26	(unrelated sample)

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	VA9204-CC9165	Injection Date:	05/08/18
Lab File ID:	A241495.D	Injection Time:	06:46
Instrument ID:	GCMSA	Method:	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	411626	7.80	259385	10.17	381142	11.11	347164	14.51	204541	17.11
Upper Limit ^a	823252	8.30	518770	10.67	762284	11.61	694328	15.01	409082	17.61
Lower Limit ^b	205813	7.30	129693	9.67	190571	10.61	173582	14.01	102271	16.61

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
VA9204-BS	431368	7.79	268335	10.17	394996	11.11	359810	14.51	205198	17.11
VA9204-MB	413671	7.79	260614	10.17	373923	11.10	337927	14.50	207897	17.11
JC65633-9	394717	7.79	258780	10.17	361606	11.11	324190	14.50	200329	17.11
JC65633-1	407890	7.80	267767	10.17	383178	11.11	339630	14.51	211970	17.11
JC65633-2	403787	7.80	262041	10.17	366028	11.11	327864	14.51	210425	17.11
JC65633-3	405540	7.80	255977	10.17	355635	11.11	324121	14.51	204863	17.11
JC65633-4	420832	7.80	258278	10.17	370389	11.11	333731	14.51	210299	17.11
JC65633-5	389089	7.79	244717	10.17	356947	11.11	332332	14.51	204905	17.11
JC65633-6	413269	7.80	253957	10.17	364636	11.11	334781	14.50	206751	17.11
JC65633-7	386122	7.80	248780	10.17	364963	11.11	326629	14.51	200896	17.11
JC65633-8	373223	7.79	248540	10.17	352474	11.10	325700	14.51	195691	17.11
JC65633-10	402737	7.79	249350	10.17	364075	11.11	323340	14.51	202382	17.11
JC65633-11	391664	7.80	242345	10.17	353189	11.11	316570	14.51	195549	17.11
JC65633-12	393784	7.79	247986	10.17	354487	11.11	323543	14.51	200843	17.11
ZZZZZZ	370849	7.79	245746	10.17	353902	11.11	326344	14.51	204213	17.11
ZZZZZZ	391322	7.79	244234	10.17	359234	11.10	325271	14.51	198432	17.11
ZZZZZZ	384305	7.79	240225	10.17	347411	11.10	316387	14.51	199306	17.11

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Page 1 of 1

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Check Std:	VA9206-CC9165	Injection Date:	05/10/18
Lab File ID:	A241545.D	Injection Time:	09:12
Instrument ID:	GCMSA	Method:	SW846 8260C

	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
Check Std	257309	7.80	164708	10.17	243533	11.11
Upper Limit ^a	514618	8.30	329416	10.67	487066	11.61
Lower Limit ^b	128655	7.30	82354	9.67	121767	10.61

Lab Sample ID	IS 1 AREA	IS 2 AREA	IS 3 AREA	IS 4 AREA	IS 5 AREA	
VA9206-BS	270002	7.80	176252	10.17	265027	11.11
VA9204-BS2	270002	7.80	176252	10.17	265027	11.11
VA9206-MB	265895	7.80	171793	10.17	243770	11.11
VA9204-MB2	265895	7.80	171793	10.17	243770	11.11
JC65633-9MS	252948	7.81	182681	10.17	274352	11.11
JC65633-9MSD	247323	7.80	183052	10.17	275053	11.11
ZZZZZZ	254044	7.79	181048	10.17	256835	11.11

IS 1 = Tert Butyl Alcohol-D9

IS 2 = Pentafluorobenzene

IS 3 = 1,4-Difluorobenzene

IS 4 = Chlorobenzene-D5

IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Page 1 of 1

Job Number: JC65633

Account: UTC United Technologies Corporation

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Method: SW846 8260C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JC65633-1	A241503.D	103	98	91	92
JC65633-2	A241504.D	102	98	92	91
JC65633-3	A241505.D	100	98	91	90
JC65633-4	A241506.D	102	99	92	92
JC65633-5	A241507.D	101	95	89	91
JC65633-6	A241508.D	101	98	90	92
JC65633-7	A241509.D	101	96	90	91
JC65633-8	A241510.D	100	98	89	93
JC65633-9	A241499.D	100	96	91	91
JC65633-10	A241511.D	102	96	91	91
JC65633-11	A241512.D	100	96	90	92
JC65633-12	A241513.D	99	98	90	93
JC65633-9MS	A241549.D	100	94	94	96
JC65633-9MSD	A241550.D	102	96	94	97
VA9204-BS	A241496.D	99	94	91	96
VA9204-MB	A241498.D	98	95	90	93
VA9204-MB2	A241548.D	101	99	92	93

Surrogate
Compounds

Recovery
Limits

S1 = Dibromofluoromethane

80-120%

S2 = 1,2-Dichloroethane-D4

81-124%

S3 = Toluene-D8

80-120%

S4 = 4-Bromofluorobenzene

80-120%

6.6.1
6

Initial Calibration Summary

Page 1 of 5

Job Number: JC65633

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Response Factor Report MSA

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)

Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

Last Update : Thu Apr 05 12:19:04 2018

Response via : Initial Calibration

Calibration Files

5	=A240806.D	2	=A240805.D	20	=A240808.D	50	=A240809.D
100	=A240810.D	1	=A240804.D	200	=A240811.D	0.5	=A240803.D
10	=A240807.D	0.2	=A240802.D	=		=	

Compound

	5	2	20	50	100	1	200	0.5	10	0.2	Avg	%RSD
	-	-	-	-	-	-	-	-	-	-	-	-

1)	I	Tert Butyl Alcohol-d9	-----ISTD-----									
2)		ethanol							0.000#	-1.00		
3)		tertiary butyl alcohol							0.923	0.886	2.21	
4)		1,4-dioxane							0.053	0.056	5.00	
5)	I	pentafluorobenzene	-----ISTD-----									
6)		chlorodifluoromethane							0.743	0.799	0.771	3.31
7)		dichlorodifluoromethane							0.867	0.844	5.89	
8)		freon 114							0.053	0.056	5.00	
9)		freon 142b							0.000#	-1.00		
10)		chloromethane							0.897	0.962	10.16	
11)		vinyl chloride							0.978	0.991	3.47	
12)		1,3-butadiene							0.000#	-1.00		
13)		bromomethane							0.554	0.558	6.43	
14)		chloroethane							0.495	0.534	20.78	
			----- Linear regression -----						Coefficient = 0.9985			
									Response Ratio = 0.00739 + 0.43515 *A			
15)		vinyl bromide							0.514	0.506	2.94	
16)		trichlorofluoromethane							0.793	0.789	2.85	
17)		ethyl ether							0.282	0.258	6.27	
18)		acrolein							0.148	0.150	8.09	
19)		freon 113							0.409	0.392	3.21	
20)		1,1-dichloroethene							0.478	0.464	3.98	
21)		acetone							0.084	0.075	9.16	

6.7.1
6

Initial Calibration Summary

Page 2 of 5

Job Number: JC65633

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

22)	acetonitrile	0.132	0.121	0.117	0.113	0.109	0.125	0.120	6.94				
23)	iodomethane	0.949	0.945	0.912	0.878	0.914	1.085	0.864	0.939	0.936	7.24		
24)	carbon disulfide	1.848	1.825	1.722	1.624	1.715	2.190	1.618	1.784	1.791	10.16		
25)	methylene chloride	0.561	0.520	0.534	0.507	0.518	0.613	0.496	0.531	0.535	6.90		
26)	methyl acetate	0.599	0.616	0.533	0.529	0.526	0.501	0.573	0.554	7.67			
27)	methyl tert butyl ether	1.564	1.572	1.608	1.585	1.533	1.768	1.512	1.687	1.600	1.603	4.95	
28)	trans-1,2-dichloroethene	0.488	0.447	0.469	0.439	0.449	0.551	0.425	0.431	0.482	0.465	8.41	
29)	hexane	0.675	0.690	0.641	0.618	0.616	0.831	0.591	0.674	0.667	11.20		
30)	di-isopropyl ether	1.742	1.727	1.741	1.687	1.645	1.993	1.589	1.853	1.753	2.053	1.778	8.28
31)	ethyl tert-butyl ether	1.598	1.555	1.621	1.623	1.608	1.674	1.584	1.490	1.668	1.675	1.610	3.60
32)	2-butanone	0.080	0.066	0.081	0.083	0.083	0.080	0.084	0.082	0.080	7.19		
33)	1,1-dichloroethane	0.929	0.950	0.897	0.842	0.842	1.136	0.797	0.934	0.916	11.34		
34)	chloroprene	0.706	0.683	0.714	0.671	0.691	0.775	0.659	0.720	0.702	5.14		
35)	acrylonitrile	0.293	0.243	0.283	0.274	0.271	0.259	0.292	0.274	0.274	6.62		
36)	vinyl acetate	0.091	0.093	0.095	0.093	0.092	0.091	0.093	0.093	1.83			
37)	ethyl acetate	0.100	0.094	0.101	0.105	0.104	0.102	0.101	0.101	0.101	3.55		
38)	2,2-dichloropropane	0.749	0.967	0.734	0.696	0.680	1.027	0.661	0.764	0.785	17.38		
39)	cis-1,2-dichloroethene	0.548	0.513	0.532	0.508	0.515	0.571	0.497	0.572	0.548	0.534	5.19	
40)	methyl acrylate	0.088	0.097	0.093	0.097	0.096	0.086	0.093	0.093	4.94			
41)	propionitrile	0.166	0.168	0.173	0.175	0.169	0.176	0.166	0.173	0.171	2.45		
42)	bromochloromethane	0.299	0.344	0.275	0.259	0.257	0.367	0.251	0.281	0.292	14.67		
43)	tetrahydrofuran	0.329	0.310	0.298	0.294	0.285	0.279	0.306	0.300	5.65			
44)	chloroform	0.839	0.798	0.813	0.769	0.774	0.890	0.740	0.858	0.812	1.009	0.830	9.25
45)	tert-butyl formate	0.515	0.507	0.523	0.505	0.482	0.567	0.473	0.515	0.511	5.59		
46)	dibromofluoromethane (s)	0.505	0.498	0.498	0.496	0.495	0.502	0.505	0.499	0.497	0.490	0.498	0.92
47)	methacrylonitrile	0.255	0.227	0.258	0.259	0.262	0.256	0.260	0.254	4.79			
48)	cyclohexane	0.751	0.800	0.773	0.743	0.738	0.810	0.730	0.801	0.781	0.770	3.91	
49)	1,1,1-trichloroethane	0.755	0.785	0.741	0.719	0.715	0.854	0.702	0.731	0.747	0.750	6.14	
50)	iso-butyl alcohol	0.044	0.055	0.046	0.044	0.047	0.046	0.046	0.046	0.047	8.06		
51)	1,1-dichloropropene	0.623	0.589	0.619	0.612	0.620	0.681	0.607	0.646	0.629	0.625	4.15	

Initial Calibration Summary

Page 3 of 5

Job Number: JC65633

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

52)	carbon tetrachloride	0.629 0.629 0.650 0.621 0.624 0.727 0.614 0.660 0.637	0.643	5.35		
53)	tert-amyl alcohol	0.069 0.068 0.067 0.069 0.066	0.066	0.070	0.068	2.23
54)	I 1,4-difluorobenzene	-----ISTD-----				
55)	1,2-dichloroethane-d4 (s)	0.357 0.356 0.366 0.352 0.346 0.355 0.343 0.366 0.365 0.355	0.356	2.20		
56)	benzene	1.270 1.255 1.238 1.184 1.183 1.383 1.120 1.377 1.279	1.254	6.95		
57)	iso-octane	1.203 1.185 1.194 1.175 1.245 1.342 1.203 1.330 1.229	1.234	4.99		
58)	tert-amyl methyl ether	1.087 1.089 1.071 1.028 1.012 1.173 0.963 1.140 1.099 1.255	1.092	7.68		
59)	heptane	0.237 0.258 0.231 0.222 0.221 0.235 0.217 0.257 0.243	0.236	6.31		
60)	isopropyl acetate	0.075 0.079 0.080 0.078	0.075	0.078	0.078	2.80
61)	1,2-dichloroethane	0.402 0.395 0.387 0.372 0.372 0.493 0.356	0.403	0.397	10.56	
62)	n-butyl alcohol	0.019 0.019 0.019 0.019 0.021 0.019 0.020 0.020	0.019	3.42		
63)	ethyl acrylate	0.385 0.442 0.413 0.418 0.431 0.525 0.421	0.410	0.431	9.63	
64)	trichloroethene	0.280 0.279 0.287 0.275 0.284 0.314 0.274 0.259 0.298 0.282	0.283	5.16		
65)	2-nitropropane	0.166 0.162 0.141 0.151 0.147	0.142	0.156	0.152	6.45
66)	methylcyclohexane	0.627 0.628 0.625 0.589 0.591 0.734 0.561 0.696 0.653	0.634	8.55		
67)	2-chloroethyl vinyl ether	0.172 0.177 0.178 0.186 0.188 0.198 0.184 0.208 0.182	0.186	5.97		
68)	methyl methacrylate	0.080 0.084 0.086 0.092	0.089	0.082	0.086	5.04
69)	1,2-dichloropropane	0.333 0.360 0.322 0.312 0.316 0.400 0.302	0.330	0.334	9.50	
70)	dibromomethane	0.190 0.193 0.190 0.190 0.190 0.194 0.183 0.191 0.194	0.191	1.77		
71)	bromodichloromethane	0.392 0.380 0.392 0.384 0.386 0.405 0.374 0.402 0.398 0.371	0.388	2.97		
72)	epichlorohydrin	0.047 0.046 0.046 0.047 0.046 0.055 0.045	0.047	0.047	6.74	
73)	cis-1,3-dichloropropene	0.449 0.457 0.447 0.461 0.475 0.480 0.467 0.505 0.465	0.467	3.83		
74)	4-methyl-2-pentanone	0.177 0.183 0.178 0.180 0.176 0.197 0.166 0.185 0.180 0.174	0.180	4.44		
75)	3-methyl-1-butanol	0.032 0.032 0.031 0.032 0.031 0.040 0.029	0.033	0.032	9.51	
76)	I chlorobenzene-d5	-----ISTD-----				
77)	toluene-d8 (s)	1.351 1.339 1.357 1.332 1.285 1.341 1.243 1.383 1.398 1.332	1.336	3.36		
78)	toluene	0.820 0.838 0.827 0.791 0.790 0.896 0.726 0.911 0.890 0.960	0.845	8.18		
79)	trans-1,3-dichloropropene	0.458 0.463 0.473 0.462 0.454 0.491 0.420 0.507 0.495	0.469	5.56		
80)	ethyl methacrylate	0.475 0.484 0.486 0.463 0.452 0.490 0.422	0.520	0.474	6.16	
81)	1,1,2-trichloroethane	0.265 0.252 0.258 0.249 0.242 0.279 0.228 0.234 0.276	0.254	6.97		

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Initial Calibration Summary

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Job Number: JC65633

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

82)	2-hexanone	0.186 0.184 0.182 0.173 0.169 0.189 0.157 0.184 0.200 0.194 0.182	6.92
83)	tetrachloroethene	0.348 0.314 0.340 0.327 0.325 0.362 0.302 0.311 0.364	0.333 6.76
84)	1,3-dichloropropane	0.475 0.502 0.481 0.475 0.465 0.558 0.437 0.551 0.489	0.492 7.99
85)	butyl acetate	0.417 0.303 0.263 0.255 ----- Linear regression ----- Coefficient = 0.9987 Response Ratio = 0.02077 + 0.23792 *A	0.305 22.53
86)	3,3-dimethyl-1-butanol		0.000# -1.00
87)	dibromochloromethane	0.341 0.333 0.326 0.327 0.320 0.403 0.303	0.356 0.339 8.98
88)	1,2-dibromoethane	0.316 0.293 0.306 0.299 0.299 0.313 0.283 0.264 0.324	0.300 6.07
89)	n-butyl ether	1.606 1.596 1.619 1.478 1.411 1.748 1.271	1.644 1.547 9.79
90)	chlorobenzene	0.819 0.810 0.807 0.804 0.808 0.883 0.773 0.822 0.832 0.838	0.820 3.48
91)	1,1,1,2-tetrachloroethane	0.407 0.397 0.409 0.381 0.365 0.388 0.337 0.445 0.429	0.395 8.23
92)	ethylbenzene	1.441 1.441 1.474 1.379 1.386 1.588 1.282 1.599 1.508 1.719	1.482 8.56
93)	m,p-xylene	0.554 0.534 0.561 0.535 0.537 0.568 0.505 0.574 0.588 0.658	0.561 7.41
94)	o-xylene	0.618 0.602 0.644 0.596 0.587 0.674 0.544 0.630 0.657 0.549	0.610 7.11
95)	styrene	0.906 0.901 0.896 0.831 0.847 0.961 0.803 1.055 0.923 0.935	0.906 7.91
96)	butyl acrylate	0.797 0.797 0.757 0.665 0.624	0.568 0.813 0.717 13.63
97)	bromoform	0.231 0.210 0.229 0.215 0.211 0.251 0.202 0.184 0.234	0.219 9.04
98)	isopropylbenzene	1.648 1.647 1.755 1.632 1.556 1.768 1.410 1.707 1.839	1.662 7.65
99)	cis-1,4-dichloro-2-butene	0.179 0.178 0.173 0.156 0.148	0.138 0.190 0.166 11.33
100)	I 1,4-dichlorobenzene-d	-----ISTD-----	
101)	4-bromofluorobenzene (s)	0.797 0.801 0.808 0.834 0.868 0.792 0.877 0.785 0.784 0.798 0.814	4.15
102)	bromobenzene	0.641 0.643 0.656 0.653 0.701 0.695 0.681 0.667 0.644	0.664 3.43
103)	1,1,2,2-tetrachloroethane	0.930 0.933 0.964 0.981 0.967 1.035 0.902 0.991 0.963	0.963 4.04
104)	trans-1,4-dichloro-2-butene	0.209 0.191 0.190 0.184 0.177	0.163 0.190 0.186 7.67
105)	1,2,3-trichloropropane	0.227 0.230 0.229 0.230 0.237 0.225 0.221	0.233 0.229 2.17
106)	n-propylbenzene	3.183 3.254 3.369 3.392 3.451 3.561 3.186 3.335 3.412 3.933	3.408 6.42
107)	2-chlorotoluene	0.648 0.656 0.708 0.726 0.754 0.726 0.731 0.622 0.695	0.696 6.41
108)	4-chlorotoluene	1.716 1.788 1.776 1.754 1.817 1.923 1.761 1.841 1.803	1.798 3.32
109)	4-ethyltoluene		0.000# -1.00
110)	1,3,5-trimethylbenzene		

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Initial Calibration Summary

Page 5 of 5

Job Number: JC65633

Sample: VA9165-ICC9165

Account: UTC United Technologies Corporation

Lab FileID: A240809.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

111)	tert-butylbenzene	2.498 2.398 2.635 2.758 2.765 2.656 2.604 2.584 2.642 2.953 2.649	5.77
		0.471 0.443 0.552 0.596 0.616 0.530 0.579	0.536 0.540 11.00
112)	1,2,4-trimethylbenzene	2.417 2.338 2.605 2.632 2.698 2.628 2.490 2.518 2.590 2.927 2.584	6.28
113)	sec-butylbenzene	3.263 3.111 3.598 3.716 3.757 3.476 3.394 3.110 3.532 3.574 3.453	6.68
114)	1,3-dichlorobenzene	1.217 1.201 1.281 1.260 1.244 1.391 1.173 1.229 1.285 1.423 1.270	6.31
115)	p-isopropyltoluene	2.721 2.628 2.939 3.008 3.052 2.859 2.807 2.738 2.939 2.907 2.860	4.73
116)	1,4-dichlorobenzene	1.302 1.219 1.289 1.266 1.252 1.373 1.182 1.427 1.312	1.291 5.82
117)	1,2-dichlorobenzene	1.315 1.342 1.382 1.358 1.332 1.496 1.248 1.573 1.422 1.436 1.390	6.79
118)	1,4-diethylbenzene		0.000# -1.00
119)	n-butylbenzene	1.428 1.440 1.528 1.453 1.458 1.559 1.359 1.585 1.518 1.697 1.503	6.40
120)	1,2,4,5-tetramethylbenzene		0.000# -1.00
121)	1,2-dibromo-3-chloropropane	0.271 0.260 0.259 0.258 0.248 0.284 0.226 0.259 0.275	0.260 6.45
122)	1,3,5-trichlorobenzene	1.305 1.184 1.313 1.300 1.239 1.480 1.159 1.327 1.365 1.488 1.316	8.30
123)	2-ethylhexyl acrylate	0.965 1.043 0.984 0.984 0.938 1.093 0.886	1.080 0.997 7.14
124)	1,2,4-trichlorobenzene	1.119 1.060 1.152 1.123 1.060 1.208 0.987 1.202 1.214 1.284 1.141	7.82
125)	hexachlorobutadiene	0.469 0.441 0.489 0.503 0.505 0.503 0.492 0.401 0.498	0.478 7.45
126)	naphthalene	3.027 3.144 2.923 2.833 2.713	2.448 3.167 2.894 8.82
127)	1,2,3-trichlorobenzene	1.006 0.975 1.043 1.033 0.993 1.080 0.924 1.120 1.078 1.059 1.031	5.62
128)	hexachloroethane	0.431 0.413 0.494 0.555 0.564	0.542 0.498 0.500 11.91
129)	2-methylnaphthalene	1.105 1.133 1.144 1.094 1.169	1.101 1.195 1.134 3.33

(#) = Out of Range ### Number of calibration levels exceeded format ###

MA9165.M

Thu Apr 05 12:23:06 2018 RPT1

6.7.1
G

Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9165\A240814.D Vial: 14
 Acq On : 3 Apr 2018 11:40 pm Operator: JessicaP
 Sample : icv9165-50 Inst : MSA
 Misc : MS25128,VA9165,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 11:21:49 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	107	0.00
2	ethanol			NA		
3 M	tertiary butyl alcohol	0.886	0.904	-2.0	110	0.03
4	1,4-dioxane	0.056	0.056	0.0	108	0.00
5 I	pentafluorobenzene	1.000	1.000	0.0	109	0.00
6 M	chlorodifluoromethane	0.771	0.713	7.5	103	0.02
7 M	dichlorodifluoromethane	0.844	0.760	10.0	96	0.02
8	freon 114			NA		
9	freon 142b			NA		
10 M	chloromethane	0.962	0.842	12.5	101	0.01
11 M	vinyl chloride	0.991	0.867	12.5	95	0.02
12	1,3-butadiene			NA		
13 M	bromomethane	0.558	0.515	7.7	104	0.00
14 M	chloroethane	True 50.000	Calc. 48.193	% Drift 3.6	102	0.00
15	vinyl bromide	0.506	0.532	-5.1	114	0.00
16 M	trichlorofluoromethane	0.789	0.726	8.0	100	0.02
17 M	ethyl ether	0.258	0.261	-1.2	112	0.00
18 M	acrolein	0.150	0.189	-26.0	147	0.00
19	freon 113	0.392	0.452	-15.3	128	0.01
20 M	1,1-dichloroethene	0.464	0.424	8.6	105	0.01
21 M	acetone	0.075	0.068	9.3	99	0.01
22 M	acetonitrile	0.120	0.141	-17.5	132	0.07
23 M	iodomethane	0.936	0.876	6.4	109	0.01
24 M	carbon disulfide	1.791	1.682	6.1	113	0.00
25 M	methylene chloride	0.535	0.520	2.8	112	0.00
26 M	methyl acetate	0.554	0.511	7.8	105	0.00
27 M	methyl tert butyl ether	1.603	1.564	2.4	108	0.00
28 M	trans-1,2-dichloroethene	0.465	0.436	6.2	108	0.00
29	hexane	0.667	0.532	20.2	94	0.00
30 M	di-isopropyl ether	1.778	1.665	6.4	108	0.00
31 M	ethyl tert-butyl ether	1.610	1.598	0.7	107	0.00
32 M	2-butanone	0.080	0.080	0.0	104	0.01
33 M	1,1-dichloroethane	0.916	0.836	8.7	108	0.00
34 M	chloroprene	0.702	0.695	1.0	113	0.00
35 M	acrylonitrile	0.274	0.293	-6.9	116	0.00
36 M	vinyl acetate	0.093	0.097	-4.3	111	0.00
37 M	ethyl acetate	0.101	0.108	-6.9	112	0.00

Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.659	16.1	103	0.00	9.66
39 M	cis-1,2-dichloroethene	0.534	0.519	2.8	111	0.00	9.63
40	methyl acrylate	0.093	0.088	5.4	104	0.00	9.70
41 M	propionitrile	0.171	0.175	-2.3	109	0.00	9.68
42 M	bromochloromethane	0.292	0.257	12.0	108	0.00	9.94
43 M	tetrahydrofuran	0.300	0.385	-28.3	143	0.00	9.99
44 M	chloroform	0.830	0.777	6.4	110	0.00	10.00
45	tert-butyl formate	0.511	0.427	16.4	92	0.00	10.07
46 S	dibromofluoromethane (s)	0.498	0.499	-0.2	110	0.00	10.21
47 M	methacrylonitrile	0.254	0.251	1.2	106	0.00	9.88
48	cyclohexane	0.770	0.941	-22.2	138	0.00	10.38
49 M	1,1,1-trichloroethane	0.750	0.685	8.7	104	0.00	10.29
50	iso-butyl alcohol	0.047	0.046	2.1	114	0.00	10.45
51	1,1-dichloropropene	0.625	0.602	3.7	107	0.00	10.47
52	carbon tetrachloride	0.643	0.603	6.2	106	0.00	10.51
53	tert-amyl alcohol	0.068	0.069	-1.5	109	0.00	10.60
54 I	1,4-difluorobenzene	1.000	1.000	0.0	108	0.00	11.12
55 S	1,2-dichloroethane-d4 (s)	0.356	0.353	0.8	108	0.00	10.64
56 M	benzene	1.254	1.177	6.1	107	0.00	10.74
57 M	iso-octane	1.234	1.174	4.9	108	0.00	10.79
58	tert-amyl methyl ether	1.092	1.025	6.1	108	0.00	10.80
59 M	heptane	0.236	0.240	-1.7	117	0.00	10.95
60 M	isopropyl acetate	0.078	0.078	0.0	106	0.00	10.67
61 M	1,2-dichloroethane	0.397	0.373	6.0	108	0.00	10.73
62	n-butyl alcohol	0.019	0.019	0.0	107	0.00	11.22
63	ethyl acrylate	0.431	0.411	4.6	106	0.00	11.48
64 M	trichloroethene	0.283	0.275	2.8	108	0.00	11.47
65 M	2-nitropropane	0.152	0.190	-25.0	136	0.00	12.27
66 m	methylcyclohexane	0.634	0.568	10.4	104	0.00	11.74
67 M	2-chloroethyl vinyl ether	0.186	0.192	-3.2	112	0.00	12.30
68 M	methyl methacrylate	0.086	0.083	3.5	105	0.00	11.75
69 M	1,2-dichloropropane	0.334	0.309	7.5	107	0.00	11.74
70 M	dibromomethane	0.191	0.192	-0.5	109	0.00	11.90
71 M	bromodichloromethane	0.388	0.376	3.1	106	0.00	12.03
72	epichlorohydrin	0.047	0.044	6.4	102	0.00	12.42
73 M	cis-1,3-dichloropropene	0.467	0.451	3.4	106	0.00	12.53
74 M	4-methyl-2-pentanone	0.180	0.176	2.2	106	0.00	12.65
75 M	3-methyl-1-butanol	0.032	0.032	0.0	107	0.00	12.65
76 I	chlorobenzene-d5	1.000	1.000	0.0	102	0.00	14.52
77 S	toluene-d8 (s)	1.336	1.356	-1.5	104	0.00	12.86
78	toluene	0.845	0.830	1.8	107	0.00	12.94
79	trans-1,3-dichloropropene	0.469	0.442	5.8	98	0.00	13.13
80	ethyl methacrylate	0.474	0.449	5.3	99	0.00	13.15
81	1,1,2-trichloroethane	0.254	0.256	-0.8	105	0.00	13.36
82	2-hexanone	0.182	0.173	4.9	102	0.00	13.57
83 M	tetrachloroethene	0.333	0.380	-14.1	119	0.00	13.58
84 M	1,3-dichloropropane	0.492	0.490	0.4	105	0.00	13.57
-----		True	Calc.	% Drift	-----		
85 M	butyl acetate	50.000	53.430	-6.9	107	0.00	13.66
-----		AvgRF	CCRF	% Dev	-----		
86	3,3-dimethyl-1-butanol			NA			
87 M	dibromochloromethane	0.339	0.339	0.0	106	0.00	13.85
88 M	1,2-dibromoethane	0.300	0.307	-2.3	105	0.00	14.02
89 M	n-butyl ether	1.547	1.430	7.6	99	0.00	14.49
90 M	chlorobenzene	0.820	0.785	4.3	100	0.00	14.55
91 M	1,1,1,2-tetrachloroethane	0.395	0.392	0.8	105	0.00	14.61

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Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240814.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.388	6.3	103	0.00	14.63
93 M	m,p-xylene	0.561	0.534	4.8	102	0.00	14.75
94 M	o-xylene	0.610	0.604	1.0	104	0.00	15.21
95 M	styrene	0.906	0.839	7.4	103	0.00	15.22
96	butyl acrylate	0.717	0.682	4.9	105	0.00	15.02
97 M	bromoform	0.219	0.226	-3.2	107	0.00	15.48
98	isopropylbenzene	1.662	1.652	0.6	103	0.00	15.60
99	cis-1,4-dichloro-2-butene	0.166	0.156	6.0	102	0.00	15.65
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00	17.12
101 S	4-bromofluorobenzene (s)	0.814	0.829	-1.8	103	0.00	15.81
102 M	bromobenzene	0.664	0.656	1.2	104	0.00	16.03
103 M	1,1,2,2-tetrachloroethane	0.963	0.973	-1.0	103	0.00	15.91
104 M	trans-1,4-dichloro-2-bute	0.186	0.232	-24.7	131	0.00	15.96
105 M	1,2,3-trichloropropane	0.229	0.240	-4.8	108	0.00	16.00
106 M	n-propylbenzene	3.408	3.373	1.0	103	0.00	16.06
107 M	2-chlorotoluene	0.696	0.704	-1.1	101	0.00	16.22
108 M	4-chlorotoluene	1.798	1.815	-0.9	107	0.00	16.32
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.700	-1.9	102	0.00	16.23
111 M	tert-butylbenzene	0.540	0.603	-11.7	105	0.00	16.63
112 M	1,2,4-trimethylbenzene	2.584	2.673	-3.4	105	0.00	16.67
113 M	sec-butylbenzene	3.453	3.733	-8.1	104	0.00	16.87
114 M	1,3-dichlorobenzene	1.270	1.261	0.7	104	0.00	17.06
115 M	p-isopropyltoluene	2.860	2.997	-4.8	103	0.00	17.00
116 M	1,4-dichlorobenzene	1.291	1.264	2.1	104	0.00	17.15
117 M	1,2-dichlorobenzene	1.390	1.355	2.5	104	0.00	17.59
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.467	2.4	105	0.00	17.46
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.259	0.4	104	0.00	18.43
122 M	1,3,5-trichlorobenzene	1.316	1.290	2.0	103	0.00	18.65
123	2-ethylhexyl acrylate	0.997	1.003	-0.6	106	0.00	19.36
124 M	1,2,4-trichlorobenzene	1.141	1.142	-0.1	106	0.00	19.37
125 M	hexachlorobutadiene	0.478	0.485	-1.5	100	0.00	19.53
126 M	naphthalene	2.894	2.957	-2.2	108	0.00	19.70
127 M	1,2,3-trichlorobenzene	1.031	1.033	-0.2	104	0.00	19.97
128 M	hexachloroethane	0.500	0.575	-15.0	108	0.00	17.89
129	2-methylnaphthalene	1.134	1.054	7.1	100	0.00	20.99

(#= Out of Range
A240809.D MA9165.MSPCC's out = 0 CCC's out = 0
Thu Apr 05 11:39:45 2018 RPT16.7.2
6

Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\VA9165\A240815.D Vial: 15
 Acq On : 4 Apr 2018 12:09 am Operator: JessicaP
 Sample : icv9165-50 Inst : MSA
 Misc : MS25128,VA9165,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 12:19:04 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	105	0.00	7.81
2	ethanol		-----NA-----				
3 M	tertiary butyl alcohol		-----NA-----				
4	1,4-dioxane		-----NA-----				
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	10.18
6 M	chlorodifluoromethane		-----NA-----				
7 M	dichlorodifluoromethane		-----NA-----				
8	freon 114		-----NA-----				
9	freon 142b		-----NA-----				
10 M	chloromethane		-----NA-----				
11 M	vinyl chloride		-----NA-----				
12	1,3-butadiene		-----NA-----				
13 M	bromomethane		-----NA-----				
14 M	chloroethane		-----True-----	Calc.	% Drift	-----	-----
15	vinyl bromide		-----AvgRF-----	CCRF	% Dev	-----	-----
16 M	trichlorofluoromethane		-----NA-----				
17 M	ethyl ether		-----NA-----				
18 M	acrolein		-----NA-----				
19	freon 113		-----NA-----				
20 M	1,1-dichloroethene		-----NA-----				
21 M	acetone		-----NA-----				
22 M	acetonitrile	0.120	0.114	5.0	102	0.02	7.62
23 M	iodomethane		-----NA-----				
24 M	carbon disulfide		-----NA-----				
25 M	methylene chloride		-----NA-----				
26 M	methyl acetate		-----NA-----				
27 M	methyl tert butyl ether		-----NA-----				
28 M	trans-1,2-dichloroethene		-----NA-----				
29	hexane		-----NA-----				
30 M	di-isopropyl ether		-----NA-----				
31 M	ethyl tert-butyl ether		-----NA-----				
32 M	2-butanone		-----NA-----				
33 M	1,1-dichloroethane		-----NA-----				
34 M	chloroprene		-----NA-----				
35 M	acrylonitrile		-----NA-----				
36 M	vinyl acetate		-----NA-----				
37 M	ethyl acetate		-----NA-----				

Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRLW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane		-----	-NA-----					
39 M	cis-1,2-dichloroethene		-----	-NA-----					
40	methyl acrylate		-----	-NA-----					
41 M	propionitrile		-----	-NA-----					
42 M	bromochloromethane		-----	-NA-----					
43 M	tetrahydrofuran		-----	-NA-----					
44 M	chloroform		-----	-NA-----					
45	tert-butyl formate		-----	-NA-----					
46 S	dibromofluoromethane (s)	0.498	0.503	-1.0 105	0.00				10.20
47 M	methacrylonitrile		-----	-NA-----					
48	cyclohexane		-----	-NA-----					
49 M	1,1,1-trichloroethane		-----	-NA-----					
50	iso-butyl alcohol		-----	-NA-----					
51	1,1-dichloropropene		-----	-NA-----					
52	carbon tetrachloride		-----	-NA-----					
53	tert-amyl alcohol		-----	-NA-----					
54 I	1,4-difluorobenzene	1.000	1.000	0.0 98	0.00				11.12
55 S	1,2-dichloroethane-d4 (s)	0.356	0.363	-2.0 101	0.00				10.64
56 M	benzene		-----	-NA-----					
57 M	iso-octane		-----	-NA-----					
58	tert-amyl methyl ether		-----	-NA-----					
59 M	heptane		-----	-NA-----					
60 M	isopropyl acetate		-----	-NA-----					
61 M	1,2-dichloroethane		-----	-NA-----					
62	n-butyl alcohol		-----	-NA-----					
63	ethyl acrylate		-----	-NA-----					
64 M	trichloroethene		-----	-NA-----					
65 M	2-nitropropane		-----	-NA-----					
66 m	methylcyclohexane		-----	-NA-----					
67 M	2-chloroethyl vinyl ether		-----	-NA-----					
68 M	methyl methacrylate		-----	-NA-----					
69 M	1,2-dichloropropene		-----	-NA-----					
70 M	dibromomethane		-----	-NA-----					
71 M	bromodichloromethane		-----	-NA-----					
72	epichlorohydrin		-----	-NA-----					
73 M	cis-1,3-dichloropropene		-----	-NA-----					
74 M	4-methyl-2-pentanone		-----	-NA-----					
75 M	3-methyl-1-butanol		-----	-NA-----					
76 I	chlorobenzene-d5	1.000	1.000	0.0 89	0.00				14.52
77 S	toluene-d8 (s)	1.336	1.348	-0.9 90	0.00				12.86
78	toluene		-----	-NA-----					
79	trans-1,3-dichloropropene		-----	-NA-----					
80	ethyl methacrylate		-----	-NA-----					
81	1,1,2-trichloroethane		-----	-NA-----					
82	2-hexanone		-----	-NA-----					
83 M	tetrachloroethene	0.333	0.309	7.2 84	0.00				13.58
84 M	1,3-dichloropropene		-----	-NA-----					
85 M	butyl acetate		-----	True	Calc.	% Drift	-----		
86	3,3-dimethyl-1-butanol		-----	AvgRF	CCRF	% Dev	-----		
87 M	dibromochloromethane		-----		-NA-----				
88 M	1,2-dibromoethane		-----		-NA-----				
89 M	n-butyl ether		-----		-NA-----				
90 M	chlorobenzene		-----		-NA-----				
91 M	1,1,1,2-tetrachloroethane		-----		-NA-----				

Initial Calibration Verification

Job Number: JC65633

Sample: VA9165-ICV9165

Account: UTC United Technologies Corporation

Lab FileID: A240815.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene		-----	-NA-----						
93 M	m,p-xylene		-----	-NA-----						
94 M	o-xylene		-----	-NA-----						
95 M	styrene		-----	-NA-----						
96	butyl acrylate		-----	-NA-----						
97 M	bromoform		-----	-NA-----						
98	isopropylbenzene		-----	-NA-----						
99	cis-1,4-dichloro-2-butene		-----	-NA-----						
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	17.12			
101 S	4-bromofluorobenzene (s)	0.814	0.775	4.8	100	0.00	15.81			
102 M	bromobenzene		-----	-NA-----						
103 M	1,1,2,2-tetrachloroethane		-----	-NA-----						
104 M	trans-1,4-dichloro-2-bute		-----	-NA-----						
105 M	1,2,3-trichloropropane		-----	-NA-----						
106 M	n-propylbenzene		-----	-NA-----						
107 M	2-chlorotoluene		-----	-NA-----						
108 M	4-chlorotoluene		-----	-NA-----						
109	4-ethyltoluene		-----	-NA-----						
110 M	1,3,5-trimethylbenzene		-----	-NA-----						
111 M	tert-butylbenzene		-----	-NA-----						
112 M	1,2,4-trimethylbenzene		-----	-NA-----						
113 M	sec-butylbenzene		-----	-NA-----						
114 M	1,3-dichlorobenzene		-----	-NA-----						
115 M	p-isopropyltoluene		-----	-NA-----						
116 M	1,4-dichlorobenzene		-----	-NA-----						
117 M	1,2-dichlorobenzene		-----	-NA-----						
118	1,4-diethylbenzene		-----	-NA-----						
119 M	n-butylbenzene		-----	-NA-----						
120	1,2,4,5-tetramethylbenzen		-----	-NA-----						
121 M	1,2-dibromo-3-chloropropa		-----	-NA-----						
122 M	1,3,5-trichlorobenzene		-----	-NA-----						
123	2-ethylhexyl acrylate		-----	-NA-----						
124 M	1,2,4-trichlorobenzene		-----	-NA-----						
125 M	hexachlorobutadiene		-----	-NA-----						
126 M	naphthalene		-----	-NA-----						
127 M	1,2,3-trichlorobenzene		-----	-NA-----						
128 M	hexachloroethane		-----	-NA-----						
129	2-methylnaphthalene		-----	-NA-----						

(#= Out of Range
A240809.D MA9165.MSPCC's out = 0 CCC's out = 0
Thu Apr 05 12:22:15 2018 RPT1

Continuing Calibration Summary

Job Number: JC65633

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ja...9-18\va9204\A241495.d Vial: 2
 Acq On : 8 May 2018 6:46 am Operator: jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Thu Apr 05 12:17:39 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	118	-0.01	7.80
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	0.886	0.933	-5.3	122	-0.02	7.92
4	1,4-dioxane	0.056	0.056	0.0	127	-0.01	11.84
5 I	pentafluorobenzene	1.000	1.000	0.0	107	0.00	10.17
6 M	chlorodifluoromethane	0.771	0.673	12.7	93	0.03	4.21
7 M	dichlorodifluoromethane	0.844	0.961	-13.9	121	0.01	4.19
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.962	0.990	-2.9	120	0.00	4.53
11 M	vinyl chloride	0.991	1.197	-20.8#	131	0.01	4.83
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.558	0.707	-26.7#	140	0.00	5.51
14 M	chloroethane	True 20.000	Calc. 24.562	% Drift -22.8#	125	0.00	5.71
		AvgRF	CCRF	% Dev			
15	vinyl bromide	0.506	0.735	-45.3#	154	0.00	6.09
16 M	trichlorofluoromethane	0.789	0.954	-20.9#	129	0.01	6.24
17 M	ethyl ether			-----NA-----			
18 M	acrolein	0.150	0.145	3.3	103	0.00	6.90
19	freon 113	0.392	0.514	-31.1#	139	0.00	7.11
20 M	1,1-dichloroethene	0.464	0.518	-11.6	120	0.00	7.10
21 M	acetone	0.075	0.065	13.3	89	0.00	7.14
22 M	acetonitrile	0.120	0.108	10.0	96	0.00	7.59
23 M	iodomethane			-----NA-----			
24 M	carbon disulfide			-----NA-----			
25 M	methylene chloride	0.535	0.579	-8.2	116	0.00	7.85
26 M	methyl acetate	0.554	0.446	19.5	90	-0.02	7.64
27 M	methyl tert butyl ether			-----NA-----			
28 M	trans-1,2-dichloroethene	0.465	0.489	-5.2	112	0.00	8.26
29	hexane	0.667	0.577	13.5	97	0.00	8.62
30 M	di-isopropyl ether	1.778	1.637	7.9	101	0.00	8.87
31 M	ethyl tert-butyl ether	1.610	1.754	-8.9	116	0.00	9.36
32 M	2-butanone	0.080	0.076	5.0	101	0.00	9.58
33 M	1,1-dichloroethane	0.916	0.876	4.4	105	-0.01	8.85
34 M	chloroprene	0.702	0.647	7.8	97	-0.01	8.97
35 M	acrylonitrile			-----NA-----			
36 M	vinyl acetate	0.093	0.091	2.2	105	0.00	8.85
37 M	ethyl acetate	0.101	0.089	11.9	95	-0.01	9.60

Continuing Calibration Summary

Page 2 of 3

Job Number: JC65633

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.903	-15.0	132	-0.01	9.64
39 M	cis-1,2-dichloroethene	0.534	0.553	-3.6	111	0.00	9.61
40	methyl acrylate			-----NA-----			
41 M	propionitrile			-----NA-----			
42 M	bromochloromethane	0.292	0.276	5.5	107	0.00	9.93
43 M	tetrahydrofuran			-----NA-----			
44 M	chloroform	0.830	0.830	0.0	109	-0.01	9.99
45	tert-butyl formate	0.511	0.570	-11.5	117	0.00	10.05
46 S	dibromofluoromethane (s)	0.498	0.501	-0.6	108	0.00	10.19
47 M	methacrylonitrile			-----NA-----			
48	cyclohexane	0.770	0.851	-10.5	118	0.00	10.37
49 M	1,1,1-trichloroethane	0.750	0.877	-16.9	127	-0.01	10.27
50	iso-butyl alcohol	0.047	0.045#	4.3	106	-0.01	10.44
51	1,1-dichloropropene	0.625	0.609	2.6	105	0.00	10.46
52	carbon tetrachloride	0.643	0.753	-17.1	124	0.00	10.49
53	tert-amyl alcohol	0.068	0.072	-5.9	115	0.00	10.59
54 I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	11.11
55 S	1,2-dichloroethane-d4 (s)	0.356	0.344	3.4	98	-0.01	10.63
56 M	benzene	1.254	1.237	1.4	104	0.00	10.73
57 M	iso-octane	1.234	1.243	-0.7	108	0.00	10.78
58	tert-amyl methyl ether	1.092	1.181	-8.2	115	0.00	10.79
59 M	heptane	0.236	0.227	3.8	102	0.00	10.94
60 M	isopropyl acetate	0.078	0.083	-6.4	109	-0.01	10.66
61 M	1,2-dichloroethane	0.397	0.392	1.3	105	0.00	10.72
62	n-butyl alcohol	0.019	0.020#	-5.3	111	-0.01	11.21
63	ethyl acrylate	0.431	0.395	8.4	99	0.00	11.47
64 M	trichloroethene	0.283	0.288	-1.8	105	0.00	11.46
65 M	2-nitropropane			-----NA-----			
66 m	methylcyclohexane	0.634	0.663	-4.6	110	0.00	11.72
67 M	2-chloroethyl vinyl ether	0.186	0.185	0.5	108	0.00	12.29
68 M	methyl methacrylate			-----NA-----			
69 M	1,2-dichloropropane	0.334	0.315	5.7	102	-0.01	11.73
70 M	dibromomethane	0.191	0.203	-6.3	111	0.00	11.89
71 M	bromodichloromethane	0.388	0.403	-3.9	107	0.00	12.02
72	epichlorohydrin	0.047	0.043#	8.5	97	0.00	12.41
73 M	cis-1,3-dichloropropene	0.467	0.473	-1.3	110	0.00	12.52
74 M	4-methyl-2-pentanone	0.180	0.180	0.0	105	0.00	12.64
75 M	3-methyl-1-butanol	0.032	0.034#	-6.3	113	0.00	12.64
76 I	chlorobenzene-d5	1.000	1.000	0.0	121	0.00	14.51
77 S	toluene-d8 (s)	1.336	1.215	9.1	108	0.00	12.85
78	toluene	0.845	0.770	8.9	112	0.00	12.93
79	trans-1,3-dichloropropene	0.469	0.461	1.7	118	0.00	13.12
80	ethyl methacrylate			-----NA-----			
81	1,1,2-trichloroethane	0.254	0.249	2.0	117	0.00	13.35
82	2-hexanone	0.182	0.180	1.1	119	0.00	13.56
83 M	tetrachloroethene	0.333	0.339	-1.8	120	0.00	13.57
84 M	1,3-dichloropropane	0.492	0.480	2.4	120	0.00	13.56
85 M	butyl acetate	20.000	17.884	True	Calc.	% Drift	-----
86	3,3-dimethyl-1-butanol			AvgRF	CCRF	% Dev	-----
87 M	dibromochloromethane	0.339	0.350	-----NA-----			
88 M	1,2-dibromoethane	0.300	0.326	-3.2	129	0.00	13.84
89 M	n-butyl ether	1.547	1.438	-8.7	129	0.00	14.01
90 M	chlorobenzene	0.820	0.845	7.0	107	0.00	14.48
91 M	1,1,1,2-tetrachloroethane	0.395	0.396	-3.0	126	0.00	14.54
				-0.3	117	0.00	14.60

6.7.4
6

Continuing Calibration Summary

Job Number: JC65633

Sample: VA9204-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241495.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.459	1.6	119	0.00	14.62
93 M	m,p-xylene	0.561	0.577	-2.9	124	0.00	14.74
94 M	o-xylene	0.610	0.625	-2.5	117	0.00	15.20
95 M	styrene	0.906	0.947	-4.5	128	0.00	15.21
96	butyl acrylate	0.717	0.690	3.8	110	0.00	15.01
97 M	bromoform	0.219	0.251	-14.6	132	0.00	15.48
98	isopropylbenzene	1.662	1.719	-3.4	118	0.00	15.59
99	cis-1,4-dichloro-2-butene	0.166	0.159	4.2	111	0.00	15.64
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	131	0.00	17.11
101 S	4-bromofluorobenzene (s)	0.814	0.769	5.5	125	0.00	15.80
102 M	bromobenzene	0.664	0.659	0.8	132	0.00	16.02
103 M	1,1,2,2-tetrachloroethane	0.963	0.921	4.4	125	0.00	15.90
104 M	trans-1,4-dichloro-2-bute			-----NA-----			
105 M	1,2,3-trichloropropane	0.229	0.240	-4.8	137	0.00	15.99
106 M	n-propylbenzene	3.408	3.201	6.1	124	0.00	16.05
107 M	2-chlorotoluene	0.696	0.684	1.7	127	0.00	16.21
108 M	4-chlorotoluene	1.798	1.773	1.4	131	0.00	16.31
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.440	7.9	121	0.00	16.22
111 M	tert-butylbenzene	0.540	0.504	6.7	120	0.00	16.62
112 M	1,2,4-trimethylbenzene	2.584	2.408	6.8	121	0.00	16.66
113 M	sec-butylbenzene	3.453	3.307	4.2	120	0.00	16.86
114 M	1,3-dichlorobenzene	1.270	1.289	-1.5	132	0.00	17.05
115 M	p-isopropyltoluene	2.860	2.778	2.9	124	-0.01	16.99
116 M	1,4-dichlorobenzene	1.291	1.323	-2.5	134	0.00	17.14
117 M	1,2-dichlorobenzene	1.390	1.349	2.9	128	0.00	17.58
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.432	4.7	123	0.00	17.46
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.257	1.2	130	0.00	18.42
122 M	1,3,5-trichlorobenzene	1.316	1.257	4.5	125	0.00	18.64
123	2-ethylhexyl acrylate	0.997	0.699	29.9#	93	0.00	19.35
124 M	1,2,4-trichlorobenzene	1.141	1.107	3.0	126	0.00	19.36
125 M	hexachlorobutadiene	0.478	0.492	-2.9	132	0.00	19.52
126 M	naphthalene	2.894	2.840	1.9	127	0.00	19.69
127 M	1,2,3-trichlorobenzene	1.031	1.028	0.3	129	0.00	19.96
128 M	hexachloroethane			-----NA-----			
129	2-methylnaphthalene	1.134	0.970	14.5	111	0.00	20.97
130	ethylenimine	N/A	1.00	0.0	0#	0.00	0.00
131	bis(chloromethyl)ether	N/A	1.00	0.0	0#	0.00	0.00
<hr/>							

(#= Out of Range
A240808.D MA9165.MSPCC's out = 0 CCC's out = 0
Wed May 09 03:54:35 20186.7.4
6

Continuing Calibration Summary

Job Number: JC65633

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\kenrickb\va9206\A241545.d Vial: 5
 Acq On : 10 May 2018 9:12 am Operator: oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 Last Update : Tue Apr 17 15:31:13 2018
 Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Tert Butyl Alcohol-d9	1.000	1.000	0.0	74	0.00	7.80
2	ethanol			-----NA-----			
3 M	tertiary butyl alcohol	0.886	0.956	-7.9	78	-0.03	7.92
4	1,4-dioxane	0.056	0.062	-10.7	87	0.00	11.85
5 I	pentafluorobenzene	1.000	1.000	0.0	68	0.00	10.17
6 M	chlorodifluoromethane	0.771	0.630	18.3	55	0.00	4.19
7 M	dichlorodifluoromethane	0.844	1.138	-34.8#	91	0.00	4.18
8	freon 114			-----NA-----			
9	freon 142b			-----NA-----			
10 M	chloromethane	0.962	1.061	-10.3	82	0.00	4.52
11 M	vinyl chloride	0.991	1.207	-21.8#	84	0.00	4.82
12	1,3-butadiene			-----NA-----			
13 M	bromomethane	0.558	0.681	-22.0#	85	0.00	5.51
14 M	chloroethane	True 20.000	Calc. 24.369	% Drift -21.8#	79	0.00	5.70
15	vinyl bromide	0.506	0.665	-31.4#	88	0.00	6.08
16 M	trichlorofluoromethane	0.789	0.933	-18.3	80	0.01	6.24
17 M	ethyl ether	0.258	0.260	-0.9	66	-0.01	6.66
18 M	acrolein	0.150	0.115	23.3#	52	0.00	6.90
19	freon 113	0.392	0.480	-22.4#	83	0.00	7.10
20 M	1,1-dichloroethene	0.464	0.463	0.2	68	0.00	7.09
21 M	acetone	0.075	0.064	14.7	56	-0.01	7.14
22 M	acetonitrile	0.120	0.114	5.0	64	0.00	7.60
23 M	iodomethane	0.936	0.776	-17.1	58	-0.01	7.38
24 M	carbon disulfide	1.791	1.590	11.2	63	-0.01	7.51
25 M	methylene chloride	0.535	0.530	0.9	68	0.00	7.84
26 M	methyl acetate	0.554	0.467	15.7	60	-0.01	7.64
27 M	methyl tert butyl ether	1.603	1.716	-7.1	73	0.00	8.23
28 M	trans-1,2-dichloroethene	0.465	0.464	0.2	67	-0.01	8.25
29	hexane	0.667	0.577	13.5	61	0.00	8.62
30 M	di-isopropyl ether	1.778	1.510	15.1	59	0.00	8.87
31 M	ethyl tert-butyl ether	1.610	1.552	3.6	65	0.00	9.35
32 M	2-butanone	0.080	0.075	6.3	63	0.00	9.58
33 M	1,1-dichloroethane	0.916	0.843	8.0	64	-0.01	8.85
34 M	chloroprene	0.702	0.642	8.5	61	-0.01	8.97
35 M	acrylonitrile	0.274	0.238	13.1	57	0.00	8.19
36 M	vinyl acetate	0.093	0.086	7.5	63	0.00	8.85
37 M	ethyl acetate	0.101	0.082	18.8	55	0.00	9.62

Continuing Calibration Summary

Page 2 of 3

Job Number: JC65633

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

38 M	2,2-dichloropropane	0.785	0.796	-1.4	74	0.00	9.64
39 M	cis-1,2-dichloroethene	0.534	0.529	0.9	68	0.00	9.61
40	methyl acrylate	0.093	0.077	17.2	54	-0.01	9.69
41 M	propionitrile	0.171	0.116	32.0#	46	-0.01	9.67
42 M	bromochloromethane	0.292	0.267	8.6	66	0.00	9.92
43 M	tetrahydrofuran	0.300	0.225	24.9#	52	0.00	9.98
44 M	chloroform	0.830	0.793	4.5	66	-0.01	9.99
45	tert-butyl formate	0.511	0.309	39.5#	40#	0.00	10.05
46 S	dibromofluoromethane (s)	0.498	0.504	-1.2	69	0.00	10.19
47 M	methacrylonitrile	0.254	0.230	9.6	60	0.00	9.87
48	cyclohexane	0.770	0.766	0.5	68	0.00	10.37
49 M	1,1,1-trichloroethane	0.750	0.810	-8.0	74	0.00	10.28
50	iso-butyl alcohol	0.047	0.044	6.4	66	0.00	10.45
51	1,1-dichloropropene	0.625	0.602	3.7	66	0.00	10.46
52	carbon tetrachloride	0.643	0.701	-9.0	73	-0.01	10.49
53	tert-amyl alcohol	0.068	0.068	0.0	69	-0.01	10.58
54 I	1,4-difluorobenzene	1.000	1.000	0.0	67	0.00	11.11
55 S	1,2-dichloroethane-d4 (s)	0.356	0.344	3.4	63	-0.01	10.63
56 M	benzene	1.254	1.232	1.8	66	0.00	10.73
57 M	iso-octane	1.234	1.139	7.7	63	0.00	10.78
58	tert-amyl methyl ether	1.092	1.067	2.3	66	0.00	10.79
59 M	heptane	0.236	0.233	1.3	67	0.00	10.94
60 M	isopropyl acetate	0.078	0.084	-7.7	70	-0.01	10.66
61 M	1,2-dichloroethane	0.397	0.380	4.3	65	0.00	10.72
62	n-butyl alcohol	0.019	0.020	-5.3	70	0.00	11.21
63	ethyl acrylate	0.431	0.371	13.9	60	0.00	11.47
64 M	trichloroethene	0.283	0.290	-2.5	67	0.00	11.47
65 M	2-nitropropane	0.152	0.093	38.8#	44	-0.01	12.26
66 m	methylcyclohexane	0.634	0.638	-0.6	68	0.00	11.73
67 M	2-chloroethyl vinyl ether	0.186	0.067	64.0#	25#	0.00	12.29
68 M	methyl methacrylate	0.086	0.085	1.5	67	0.00	11.75
69 M	1,2-dichloropropene	0.334	0.307	8.1	64	-0.01	11.73
70 M	dibromomethane	0.191	0.193	-1.0	67	-0.01	11.88
71 M	bromodichloromethane	0.388	0.389	-0.3	66	0.00	12.03
72	epichlorohydrin	0.047	0.041	12.8	59	0.00	12.41
73 M	cis-1,3-dichloropropene	0.467	0.450	3.6	67	0.00	12.52
74 M	4-methyl-2-pentanone	0.180	0.183	-1.7	68	0.00	12.64
75 M	3-methyl-1-butanol	0.032	0.033	-3.1	70	0.00	12.64
76 I	chlorobenzene-d5	1.000	1.000	0.0	75	0.00	14.51
77 S	toluene-d8 (s)	1.336	1.267	5.2	70	0.00	12.85
78	toluene	0.845	0.802	5.1	73	0.00	12.93
79	trans-1,3-dichloropropene	0.469	0.426	9.2	68	0.00	13.12
80	ethyl methacrylate	0.474	0.445	6.2	69	0.00	13.14
81	1,1,2-trichloroethane	0.254	0.248	2.4	72	0.00	13.35
82	2-hexanone	0.182	0.175	3.8	72	0.00	13.56
83 M	tetrachloroethene	0.333	0.344	-3.3	76	0.00	13.57
84 M	1,3-dichloropropane	0.492	0.455	7.5	71	0.00	13.56
85 M	butyl acetate	20.000	17.174	14.1	64	0.00	13.65
86	3,3-dimethyl-1-butanol	-----	AvgRF	CCRF	% Dev	-----	-----
87 M	dibromochloromethane	0.339	0.328	3.2	76	0.00	13.84
88 M	1,2-dibromoethane	0.300	0.317	-5.7	78	0.00	14.02
89 M	n-butyl ether	1.547	1.487	3.9	69	0.00	14.48
90 M	chlorobenzene	0.820	0.855	-4.3	80	0.00	14.54
91 M	1,1,1,2-tetrachloroethane	0.395	0.408	-3.3	75	0.00	14.61



Continuing Calibration Summary

Page 3 of 3

Job Number: JC65633

Sample: VA9206-CC9165

Account: UTC United Technologies Corporation

Lab FileID: A241545.D

Project: ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

92 M	ethylbenzene	1.482	1.533	-3.4	78	0.00	14.62
93 M	m,p-xylene	0.561	0.598	-6.6	80	0.00	14.74
94 M	o-xylene	0.610	0.671	-10.0	78	0.00	15.21
95 M	styrene	0.906	0.947	-4.5	80	0.00	15.21
96	butyl acrylate	0.717	0.665	7.3	66	0.00	15.01
97 M	bromoform	0.219	0.244	-11.4	80	0.00	15.48
98	isopropylbenzene	1.662	1.792	-7.8	77	0.00	15.59
99	cis-1,4-dichloro-2-butene	0.166	0.136	18.1	59	0.00	15.65
100 I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	81	0.00	17.12
101 S	4-bromofluorobenzene (s)	0.814	0.778	4.4	78	0.00	15.80
102 M	bromobenzene	0.664	0.657	1.1	81	0.00	16.02
103 M	1,1,2,2-tetrachloroethane	0.963	0.922	4.3	78	0.00	15.90
104 M	trans-1,4-dichloro-2-bute	0.186	0.164	11.9	70	0.00	15.95
105 M	1,2,3-trichloropropane	0.229	0.234	-2.2	83	0.00	15.99
106 M	n-propylbenzene	3.408	3.361	1.4	81	0.00	16.05
107 M	2-chlorotoluene	0.696	0.714	-2.6	82	0.00	16.21
108 M	4-chlorotoluene	1.798	1.785	0.7	82	0.00	16.32
109	4-ethyltoluene			-----NA-----			
110 M	1,3,5-trimethylbenzene	2.649	2.599	1.9	80	0.00	16.22
111 M	tert-butylbenzene	0.540	0.519	3.9	76	0.00	16.62
112 M	1,2,4-trimethylbenzene	2.584	2.541	1.7	79	0.00	16.67
113 M	sec-butylbenzene	3.453	3.452	0.0	78	0.00	16.86
114 M	1,3-dichlorobenzene	1.270	1.290	-1.6	82	0.00	17.05
115 M	p-isopropyltoluene	2.860	2.910	-1.7	80	0.00	16.99
116 M	1,4-dichlorobenzene	1.291	1.316	-1.9	83	0.00	17.14
117 M	1,2-dichlorobenzene	1.390	1.377	0.9	81	0.00	17.58
118	1,4-diethylbenzene			-----NA-----			
119 M	n-butylbenzene	1.503	1.475	1.9	78	0.00	17.45
120	1,2,4,5-tetramethylbenzen			-----NA-----			
121 M	1,2-dibromo-3-chloropropa	0.260	0.293	-12.7	92	0.00	18.42
122 M	1,3,5-trichlorobenzene	1.316	1.307	0.7	81	0.00	18.65
123	2-ethylhexyl acrylate	0.997	0.540	45.8#	45#	0.00	19.35
124 M	1,2,4-trichlorobenzene	1.141	1.198	-5.0	84	0.00	19.37
125 M	hexachlorobutadiene	0.478	0.505	-5.6	84	0.00	19.52
126 M	naphthalene	2.894	3.425	-18.3	95	0.00	19.69
127 M	1,2,3-trichlorobenzene	1.031	1.199	-16.3	93	0.00	19.96
128 M	hexachloroethane	0.500	0.470	5.9	77	0.00	17.88
129	2-methylnaphthalene	1.134	1.785	-57.4#	127	0.00	20.97
130	ethylenimine			-----NA-----			
131	bis(chloromethyl)ether			-----NA-----			

(#) = Out of Range
A240808.D MA9165.M

SPCC's out = 0 CCC's out = 0
Thu May 10 23:10:29 2018

6.7.5
6

MS Volatiles**Raw Data**

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241503.d
 Acq On : 8 May 2018 11:58 am
 Operator : oyinadei
 Sample : JC65633-1 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:38:18 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

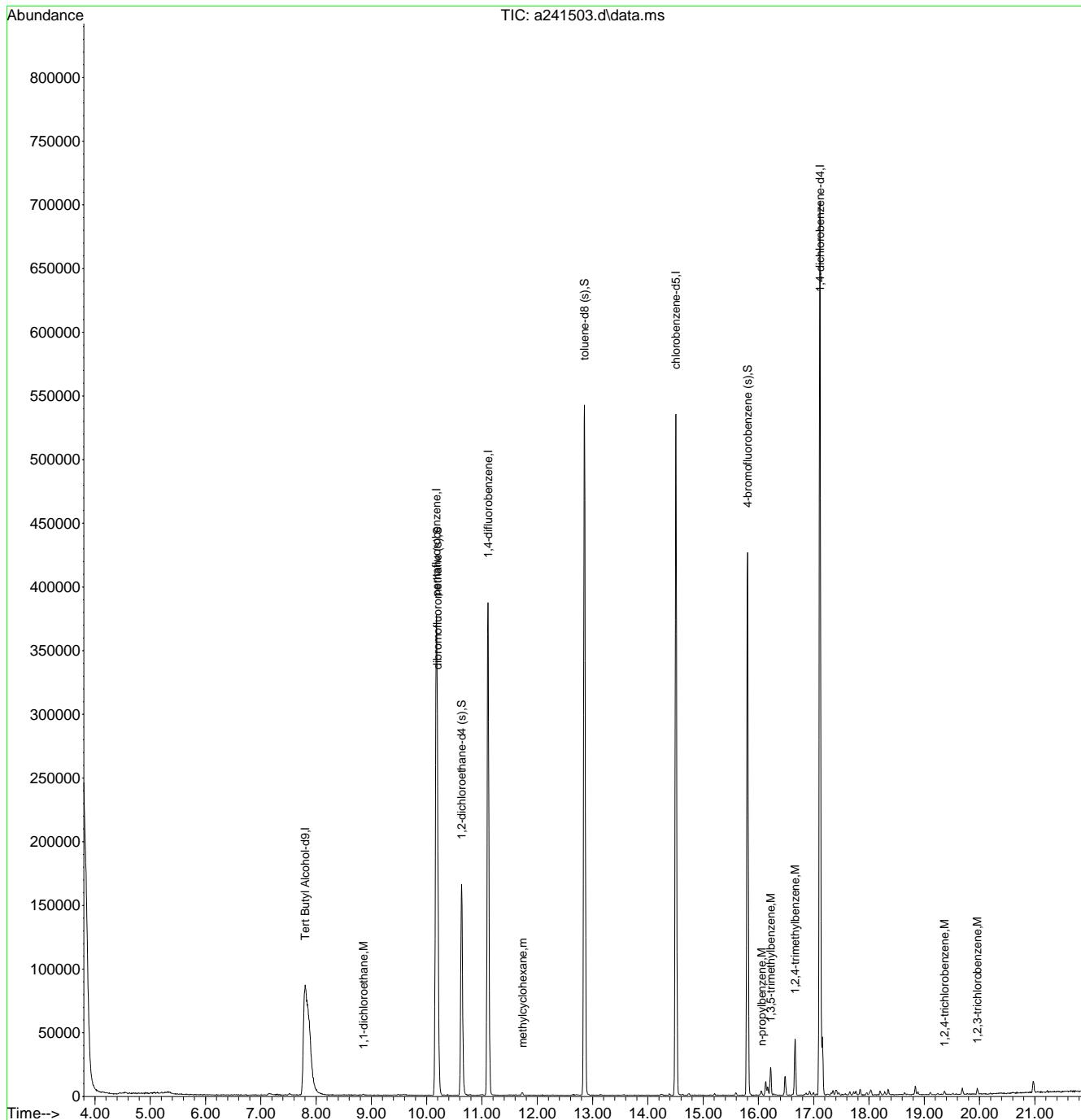
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
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Internal Standards						
1) Tert Butyl Alcohol-d9	7.802	65	407890	500.00	ug/L	0.00
5) pentafluorobenzene	10.172	168	267767	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.108	114	383178	50.00	ug/L	0.00
76) chlorobenzene-d5	14.507	117	339630	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.112	152	211970	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	136837	51.27	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.54%	
55) 1,2-dichloroethane-d4 (s)	10.632	65	133506	48.91	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	97.82%	
77) toluene-d8 (s)	12.855	98	413535	45.57	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.14%	
101) 4-bromofluorobenzene (s)	15.804	95	158995	46.05	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.10%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.854	63	975	0.20	ug/L	87
66) methylcyclohexane	11.735	83	1183	0.24	ug/L	93
106) n-propylbenzene	16.055	91	3713	0.26	ug/L	97
110) 1,3,5-trimethylbenzene	16.223	105	13053	1.16	ug/L	98
112) 1,2,4-trimethylbenzene	16.662	105	27767	2.53	ug/L	98
124) 1,2,4-trichlorobenzene	19.366	180	1189	0.25	ug/L	88
127) 1,2,3-trichlorobenzene	19.957	180	1960	0.45	ug/L	94

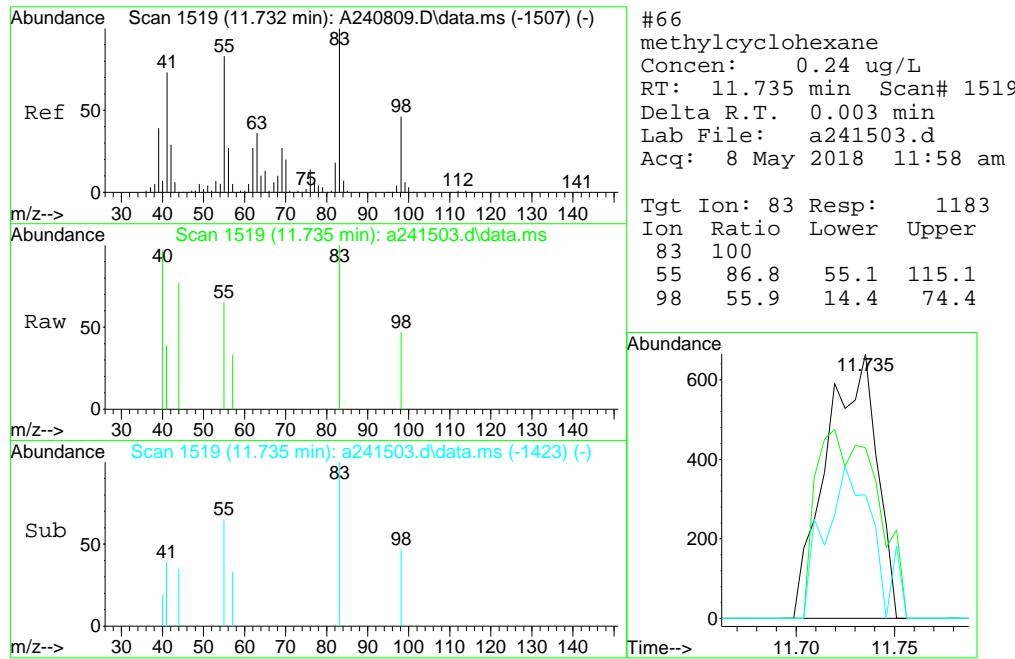
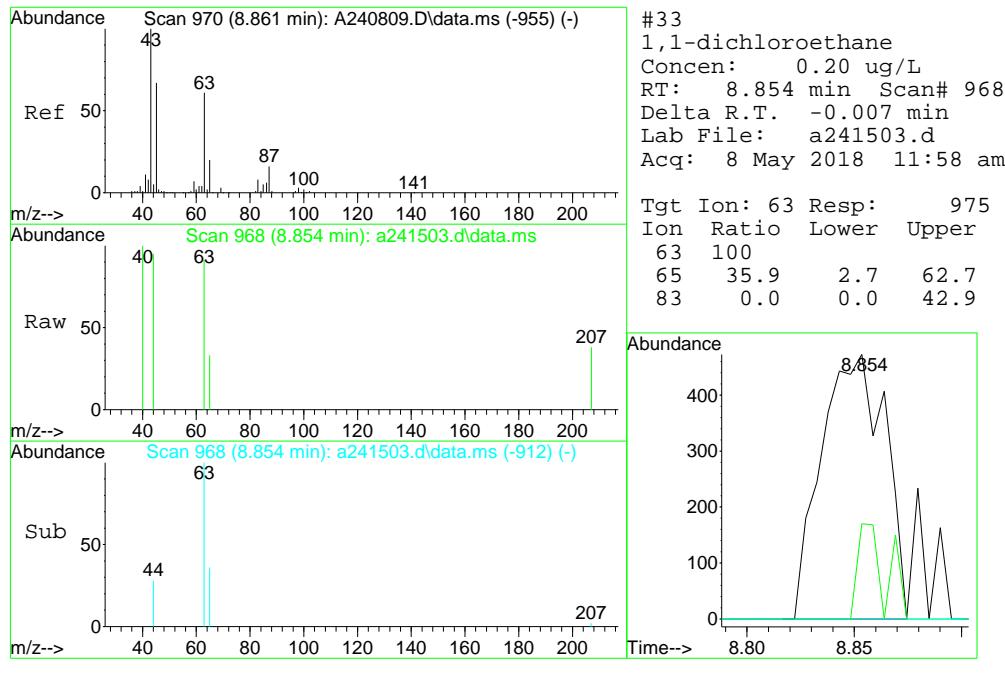
(#) = qualifier out of range (m) = manual integration (+) = signals summed

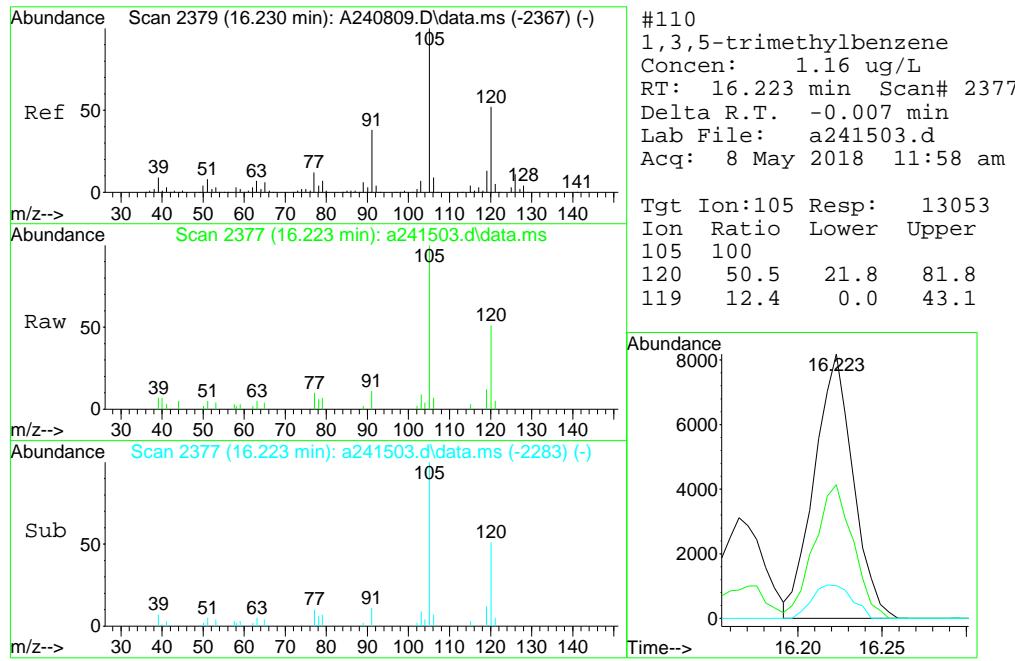
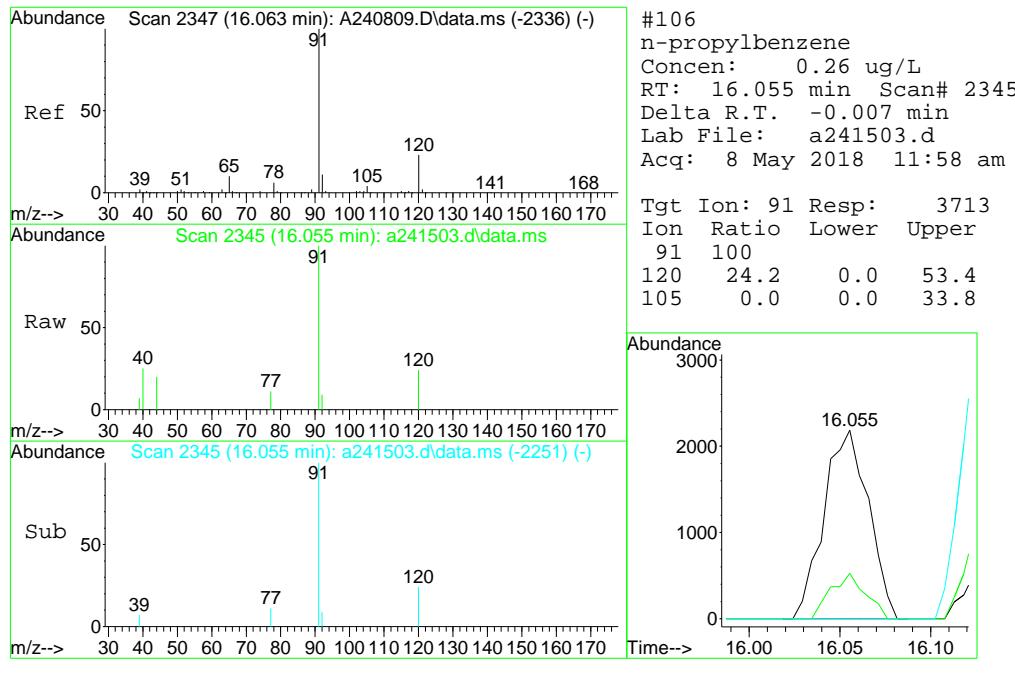
Quantitation Report (QT Reviewed)

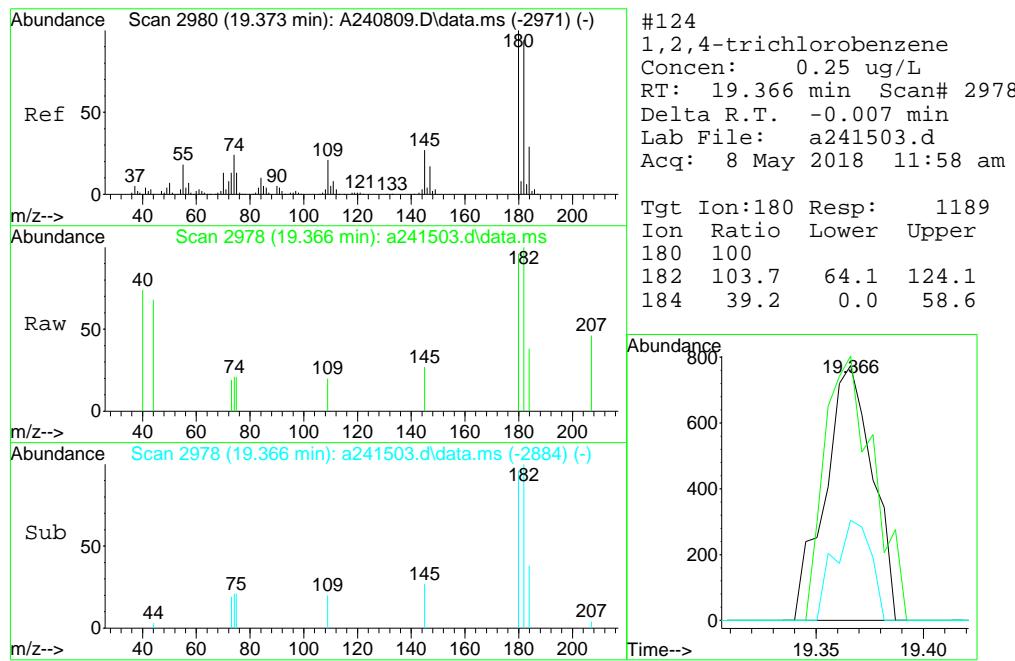
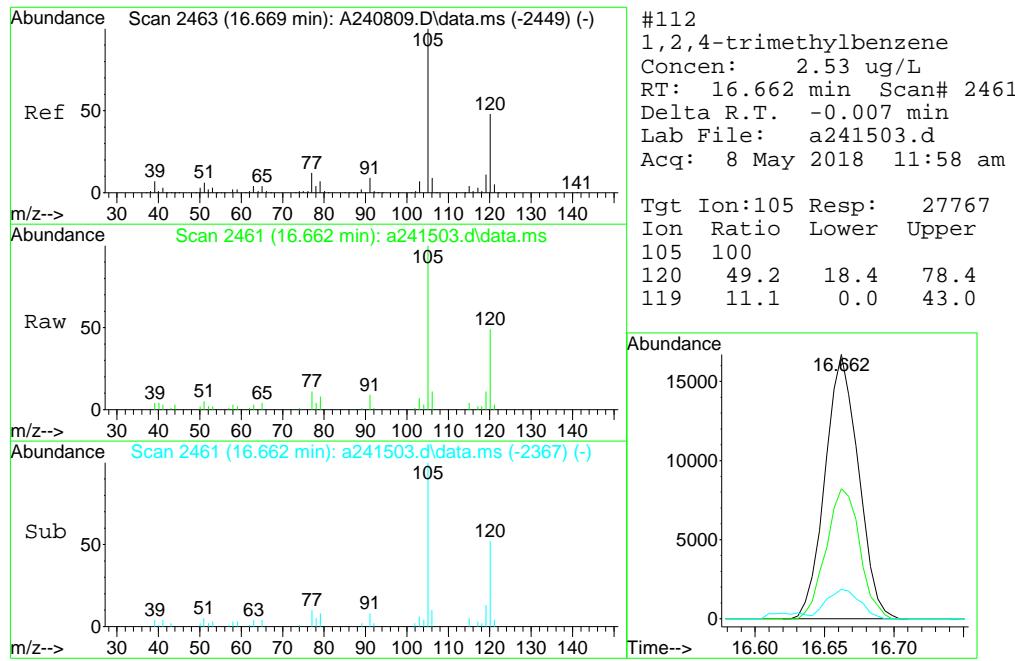
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 Acq On : 8 May 2018 11:58 am
 Operator : oyinadei
 Sample : JC65633-1 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

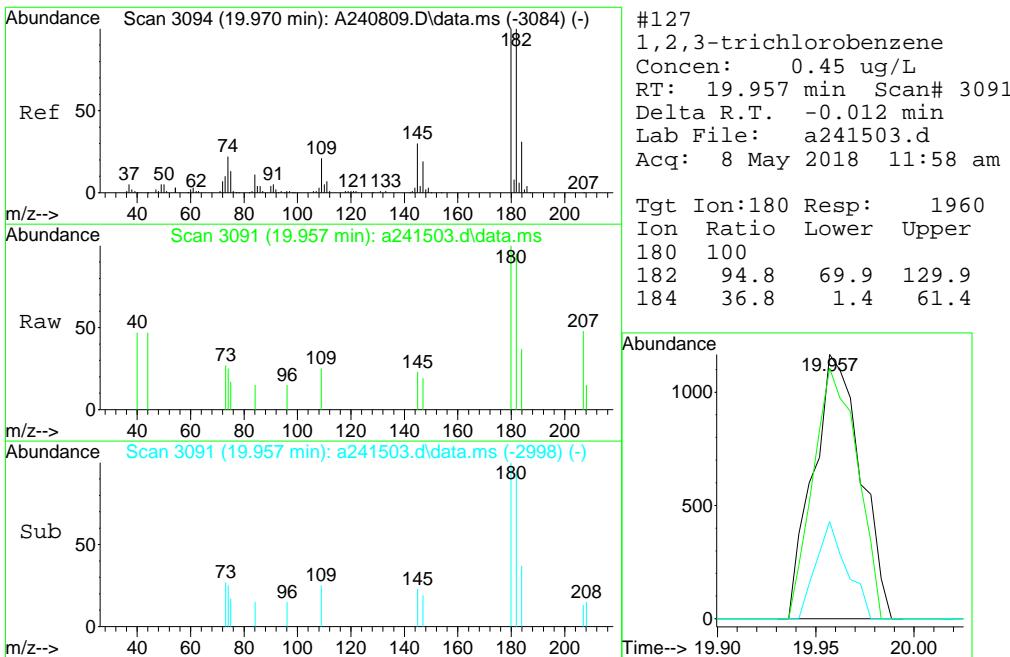
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:38:18 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration











7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241504.d
 Acq On : 8 May 2018 12:27 pm
 Operator : oyinadei
 Sample : JC65633-2 Inst : MSA
 Misc : MS26140,VA9204,5,,,10
 ALS Vial : 11 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:10:32 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

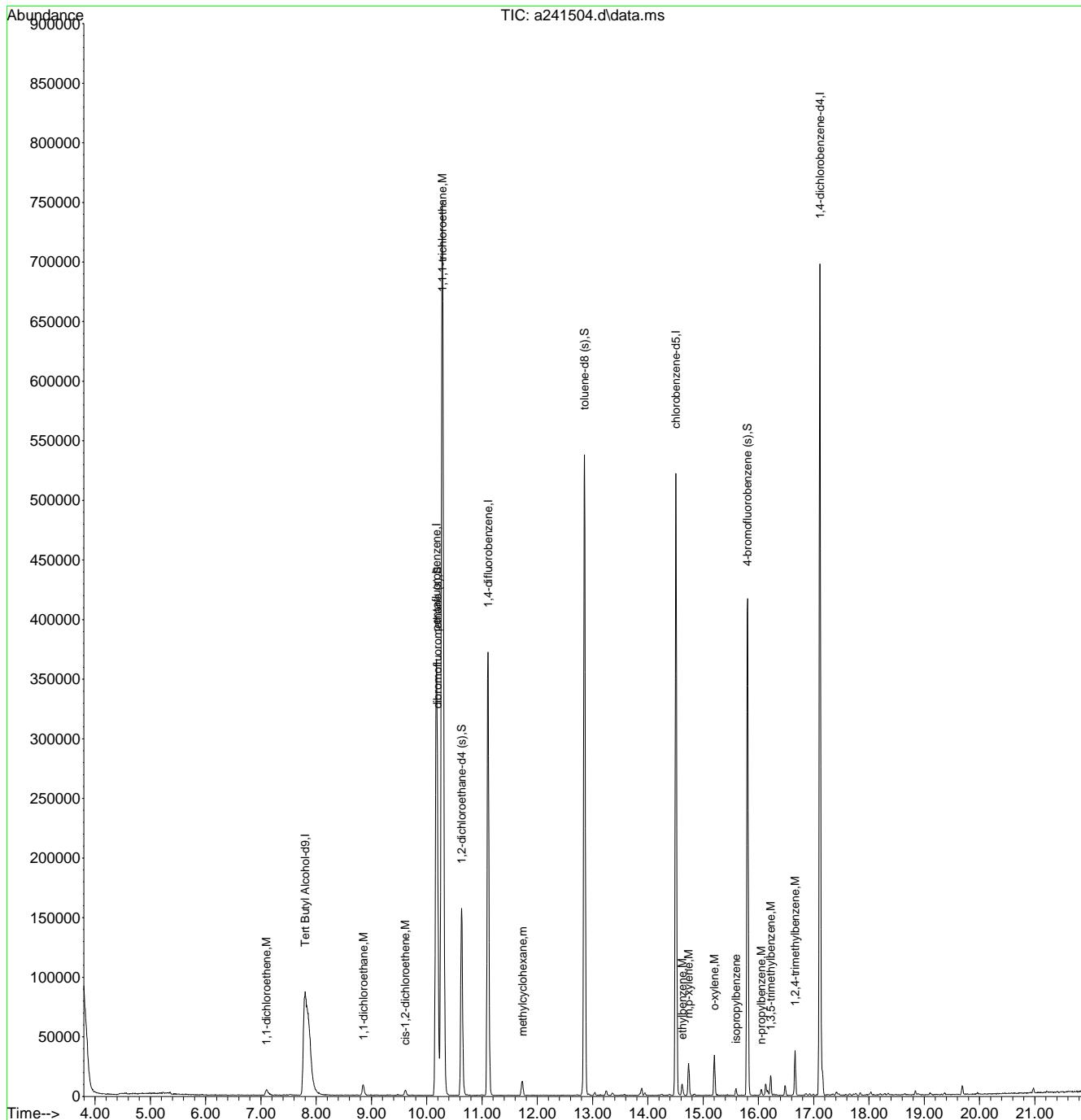
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.802	65	403787	500.00	ug/L	0.00
5) pentafluorobenzene	10.171	168	262041	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.107	114	366028	50.00	ug/L	0.00
76) chlorobenzene-d5	14.507	117	327864	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.112	152	210425	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	132885	50.88	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.76%	
55) 1,2-dichloroethane-d4 (s)	10.631	65	127504	48.90	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	97.80%	
77) toluene-d8 (s)	12.854	98	405147	46.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.50%	
101) 4-bromofluorobenzene (s)	15.799	95	156452	45.65	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.30%	
<hr/>						
Target Compounds						
20) 1,1-dichloroethene	7.101	96	4059	1.67	ug/L	93
33) 1,1-dichloroethane	8.853	63	12969	2.70	ug/L	96
39) cis-1,2-dichloroethene	9.612	96	2897	1.04	ug/L	# 69
49) 1,1,1-trichloroethane	10.281	97	731866	186.20	ug/L	98
66) methylcyclohexane	11.730	83	6615	1.43	ug/L	93
92) ethylbenzene	14.622	91	7429	0.76	ug/L	93
93) m,p-xylene	14.737	106	8876	2.41	ug/L	87
94) o-xylene	15.203	106	9973	2.49	ug/L	82
98) isopropylbenzene	15.595	105	4348	0.40	ug/L	95
106) n-propylbenzene	16.050	91	5426	0.38	ug/L	95
110) 1,3,5-trimethylbenzene	16.222	105	10531	0.94	ug/L	95
112) 1,2,4-trimethylbenzene	16.662	105	22309	2.05	ug/L	95

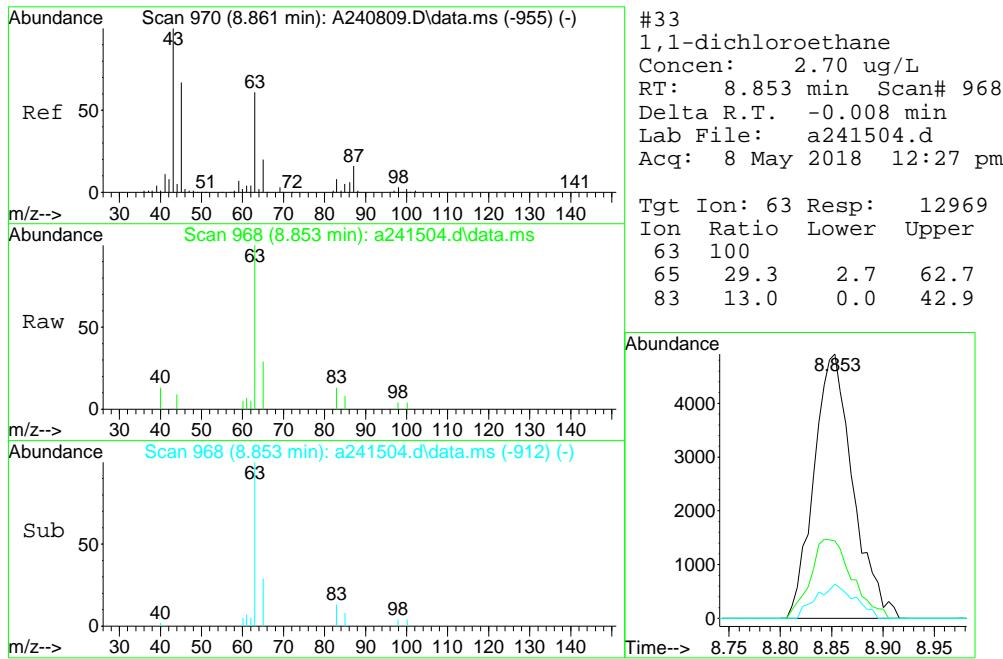
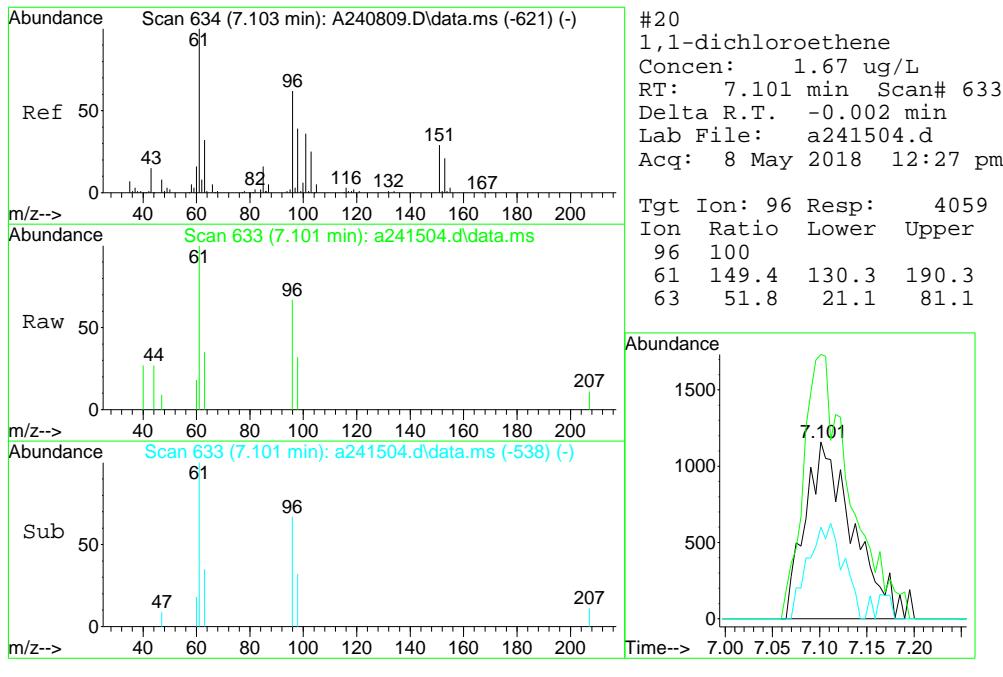
(#) = qualifier out of range (m) = manual integration (+) = signals summed

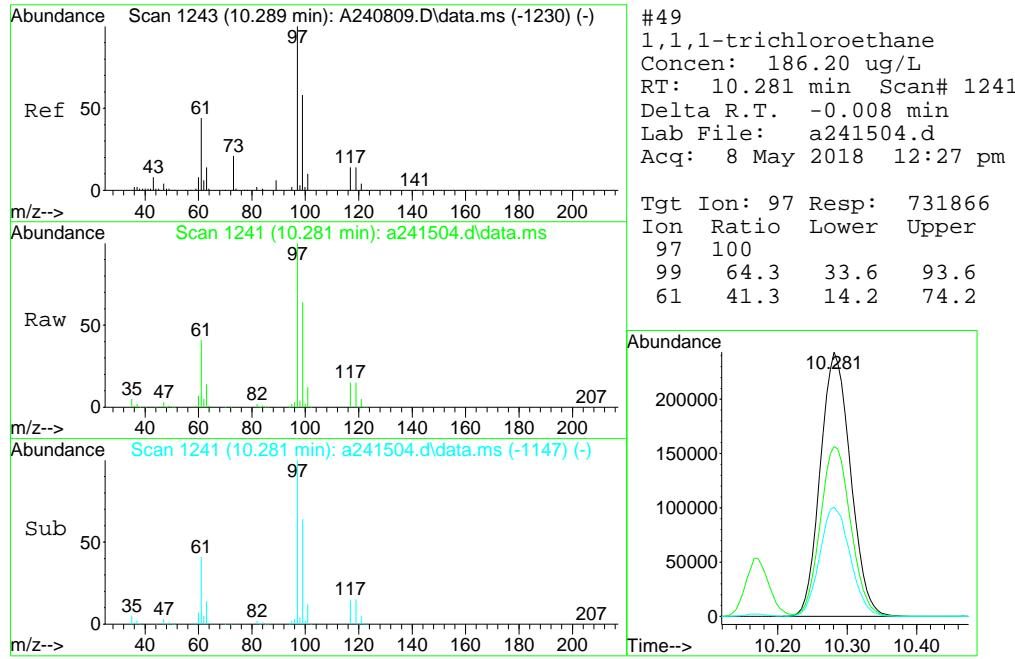
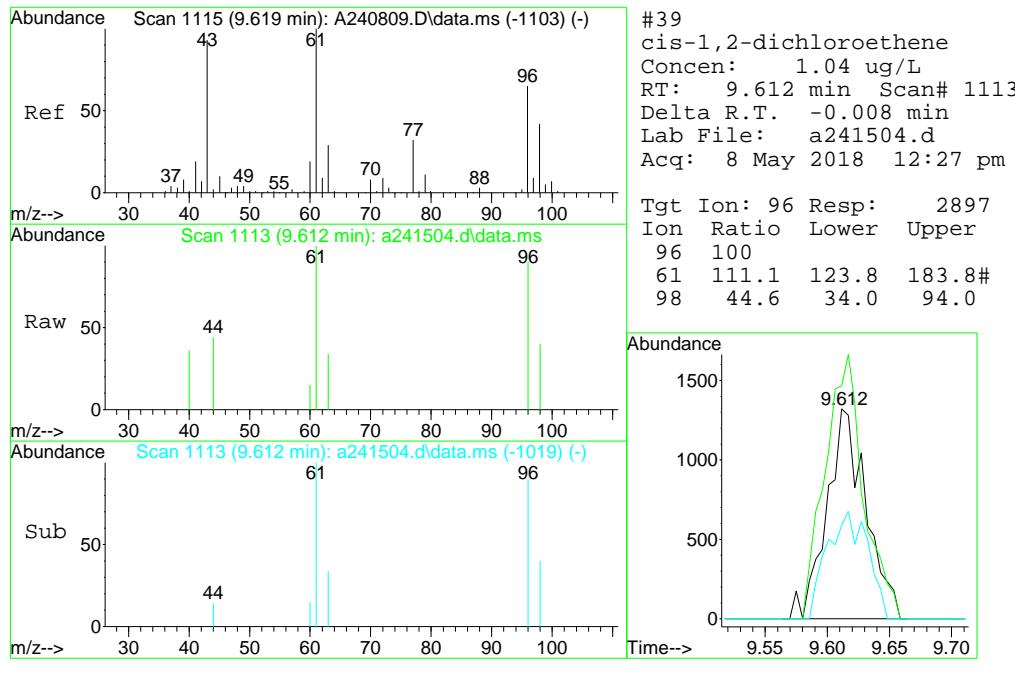
Quantitation Report (QT Reviewed)

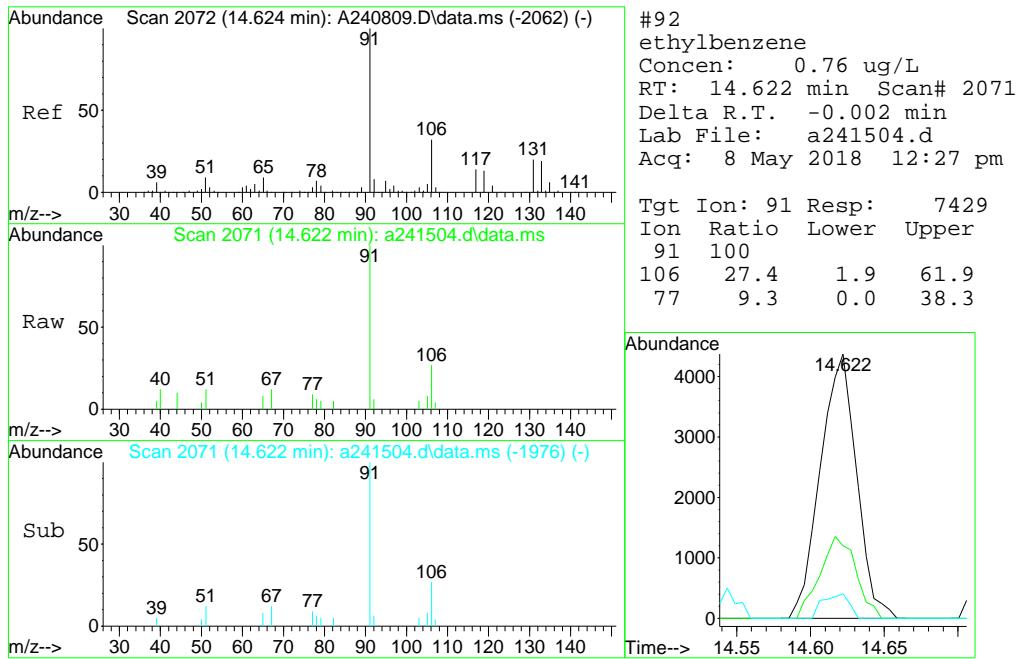
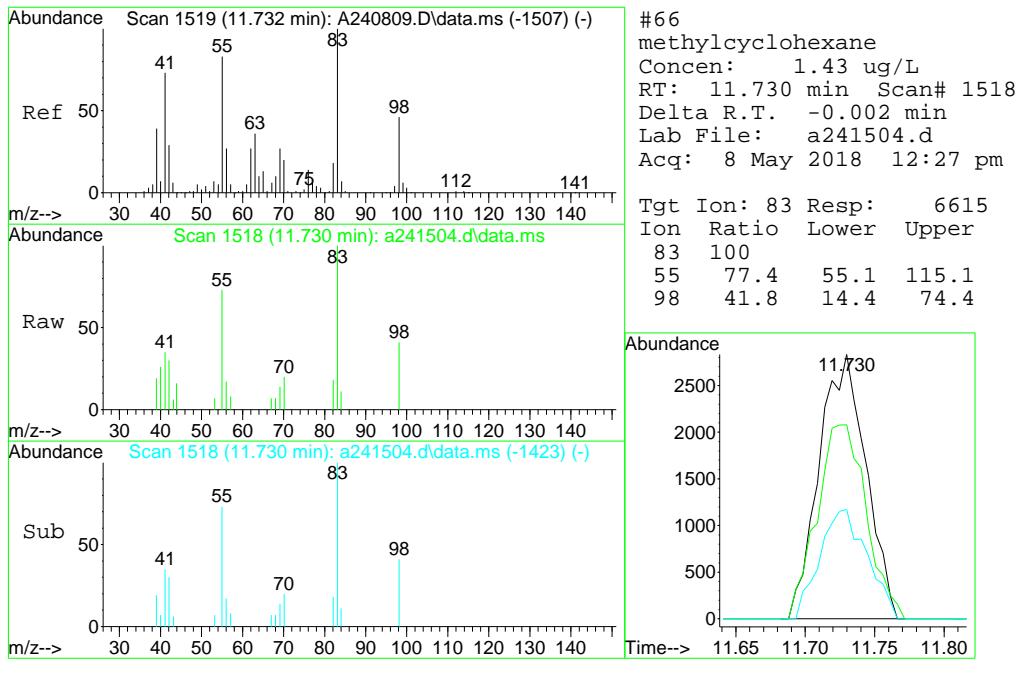
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 Acq On : 8 May 2018 12:27 pm
 Operator : oyinadei
 Sample : JC65633-2 Inst : MSA
 Misc : MS26140,VA9204,5,,,10
 ALS Vial : 11 Sample Multiplier: 1

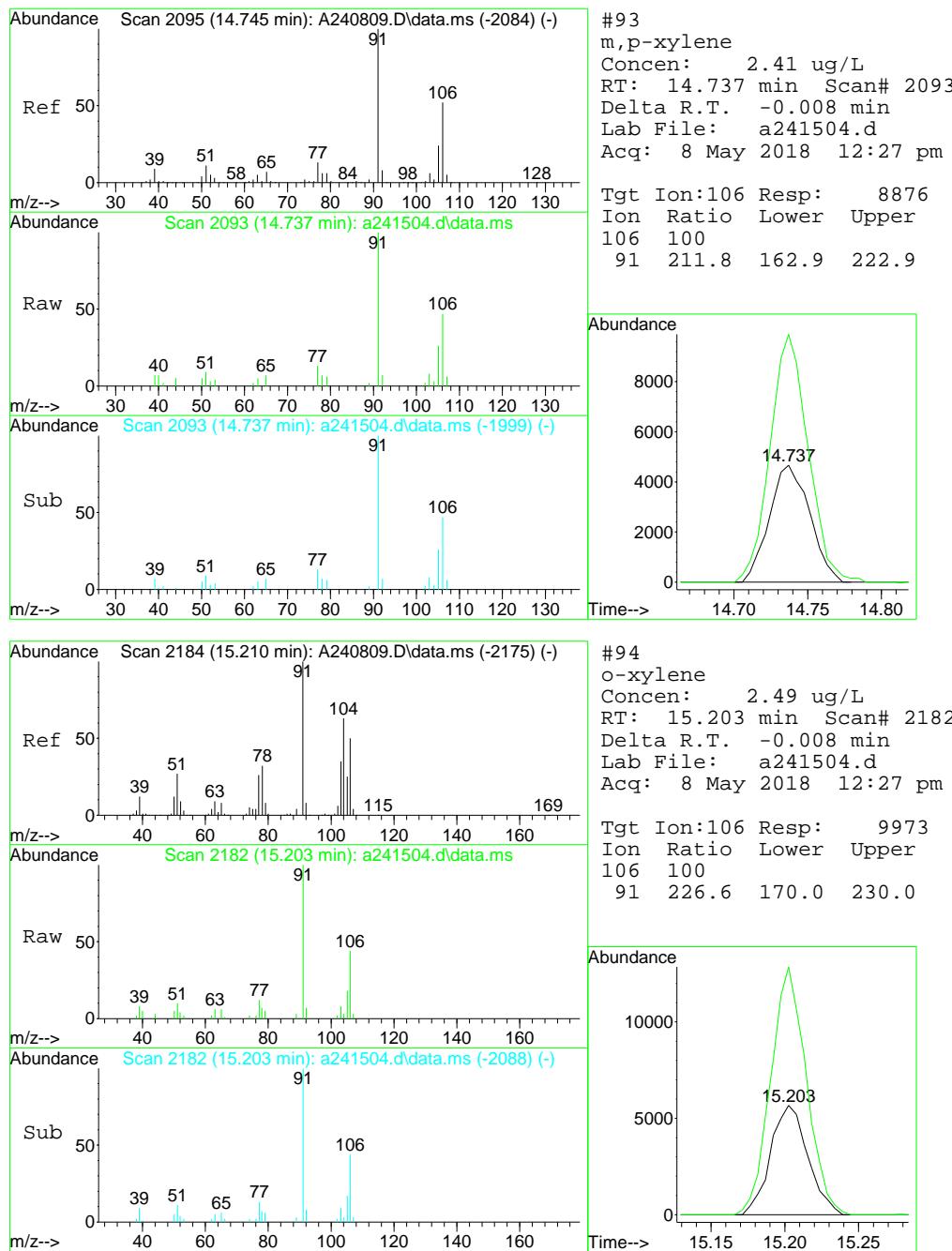
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 04:10:32 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

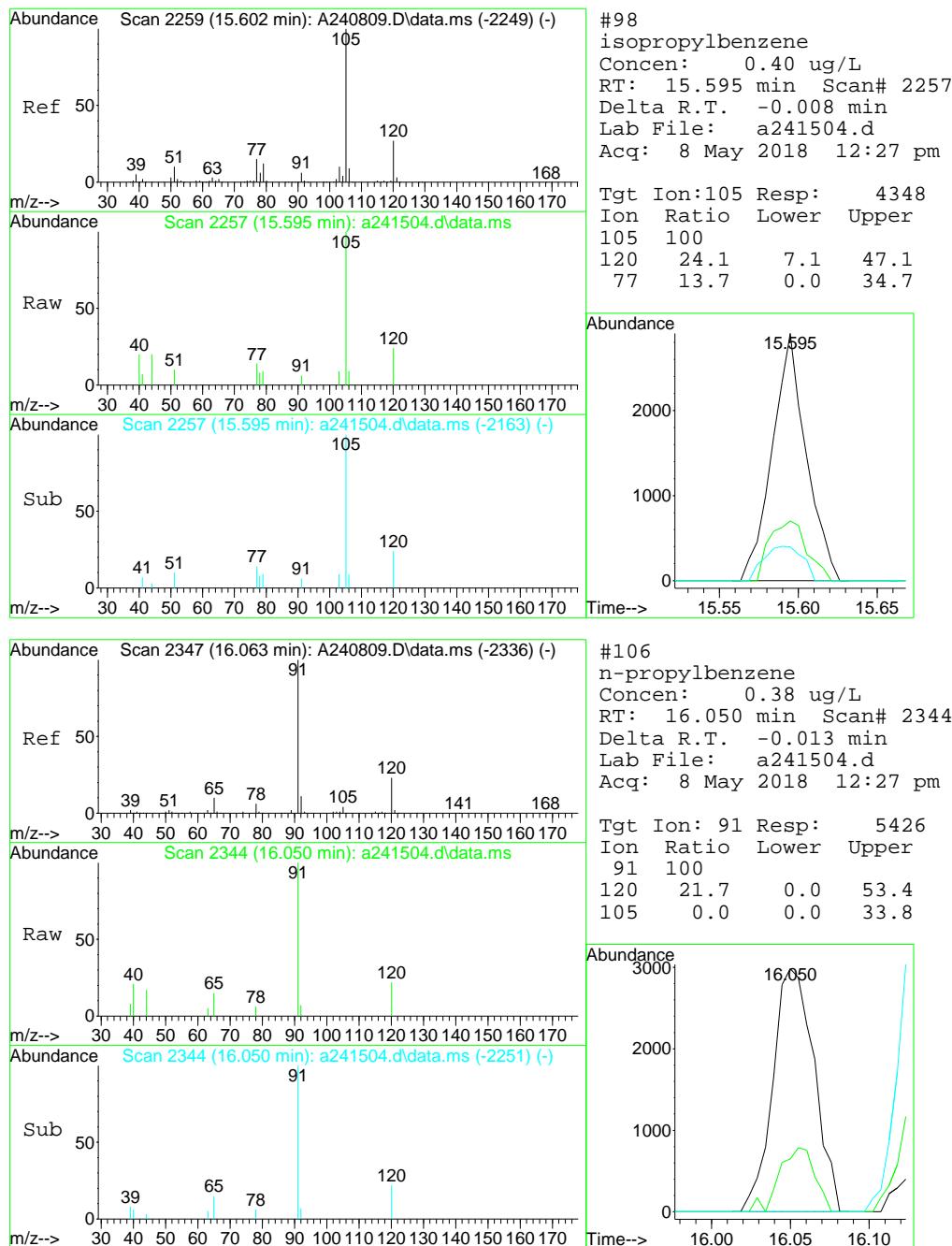


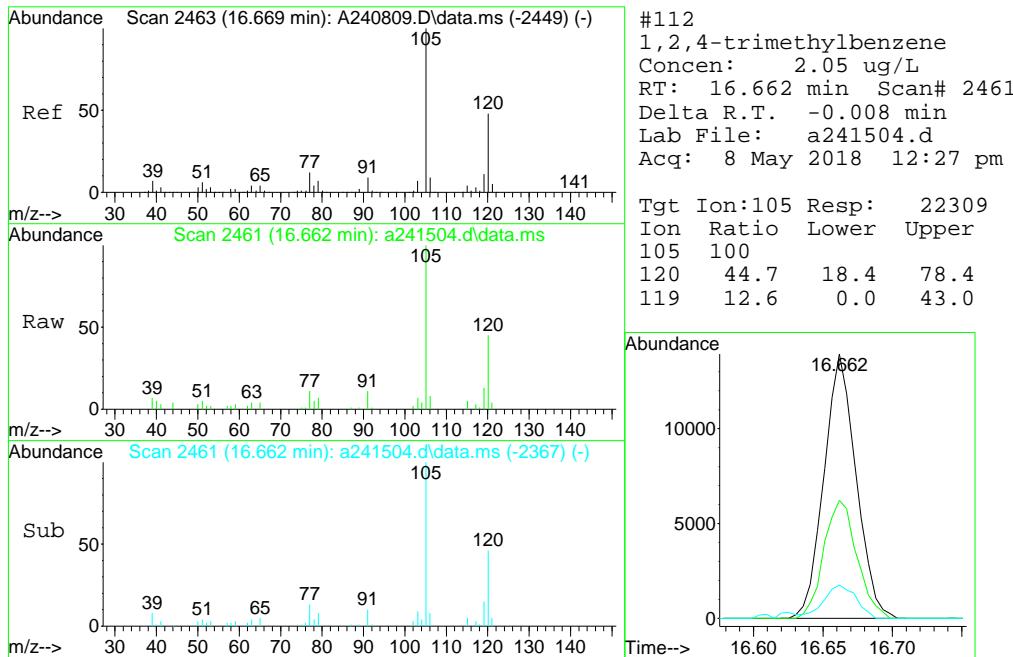
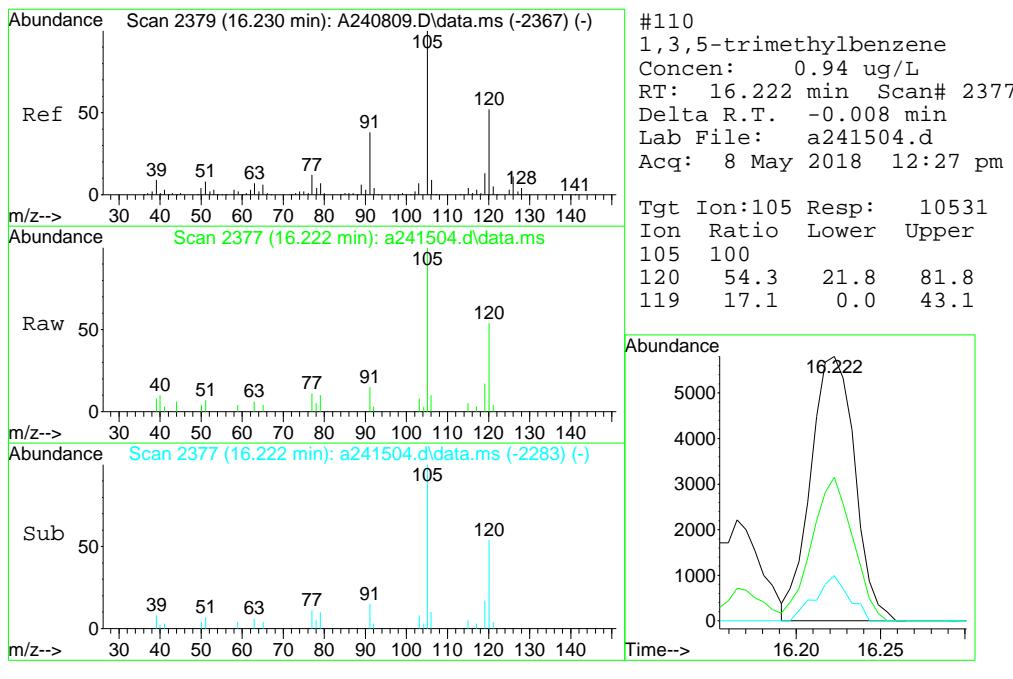












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241505.d
 Acq On : 8 May 2018 12:56 pm
 Operator : oyinadei
 Sample : JC65633-3 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:40:40 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

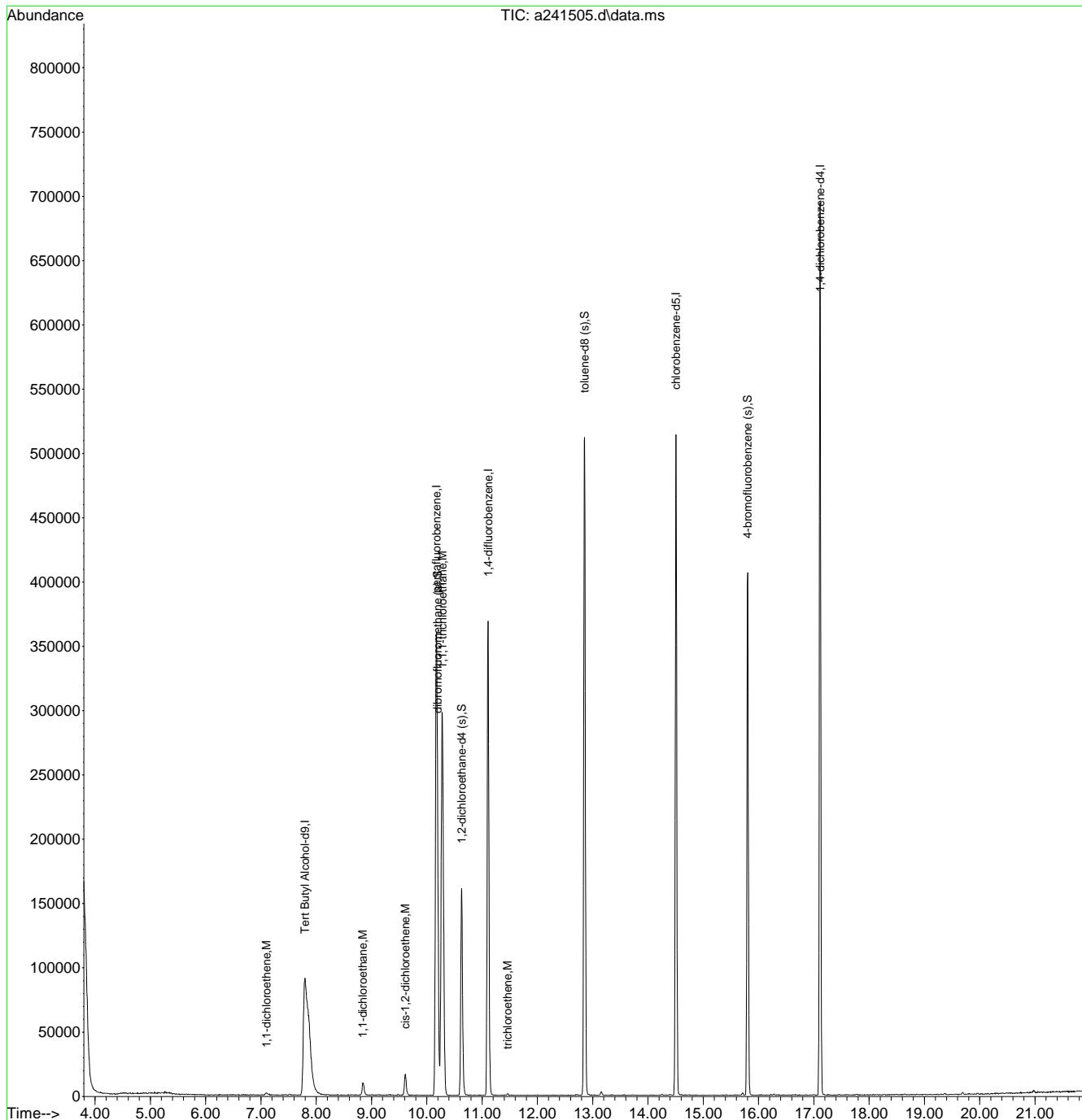
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.797	65	405540	500.00	ug/L	-0.01
5) pentafluorobenzene	10.171	168	255977	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.107	114	355635	50.00	ug/L	0.00
76) chlorobenzene-d5	14.507	117	324121	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.112	152	204863	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	127344	49.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.82%		
55) 1,2-dichloroethane-d4 (s)	10.631	65	124154	49.01	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery =	98.02%		
77) toluene-d8 (s)	12.854	98	392356	45.30	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	90.60%		
101) 4-bromofluorobenzene (s)	15.799	95	150434	45.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	90.16%		
<hr/>						
Target Compounds						
20) 1,1-dichloroethene	7.096	96	1401	0.59	ug/L	# 73
33) 1,1-dichloroethane	8.843	63	14436	3.08	ug/L	95
39) cis-1,2-dichloroethene	9.612	96	9501	3.48	ug/L	85
49) 1,1,1-trichloroethane	10.281	97	290763	75.73	ug/L	97
64) trichloroethene	11.458	95	432	0.21	ug/L	84

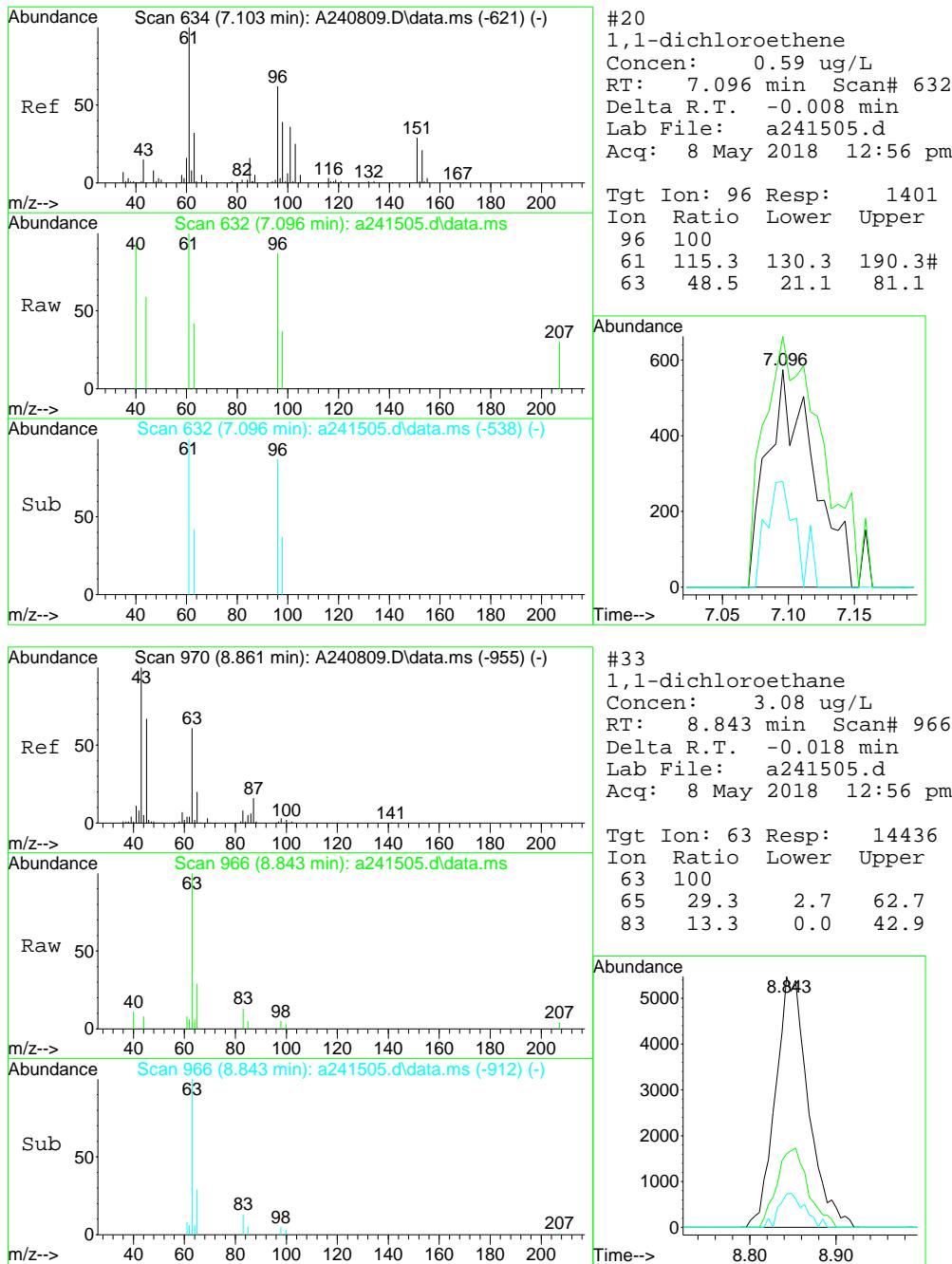
(#) = qualifier out of range (m) = manual integration (+) = signals summed

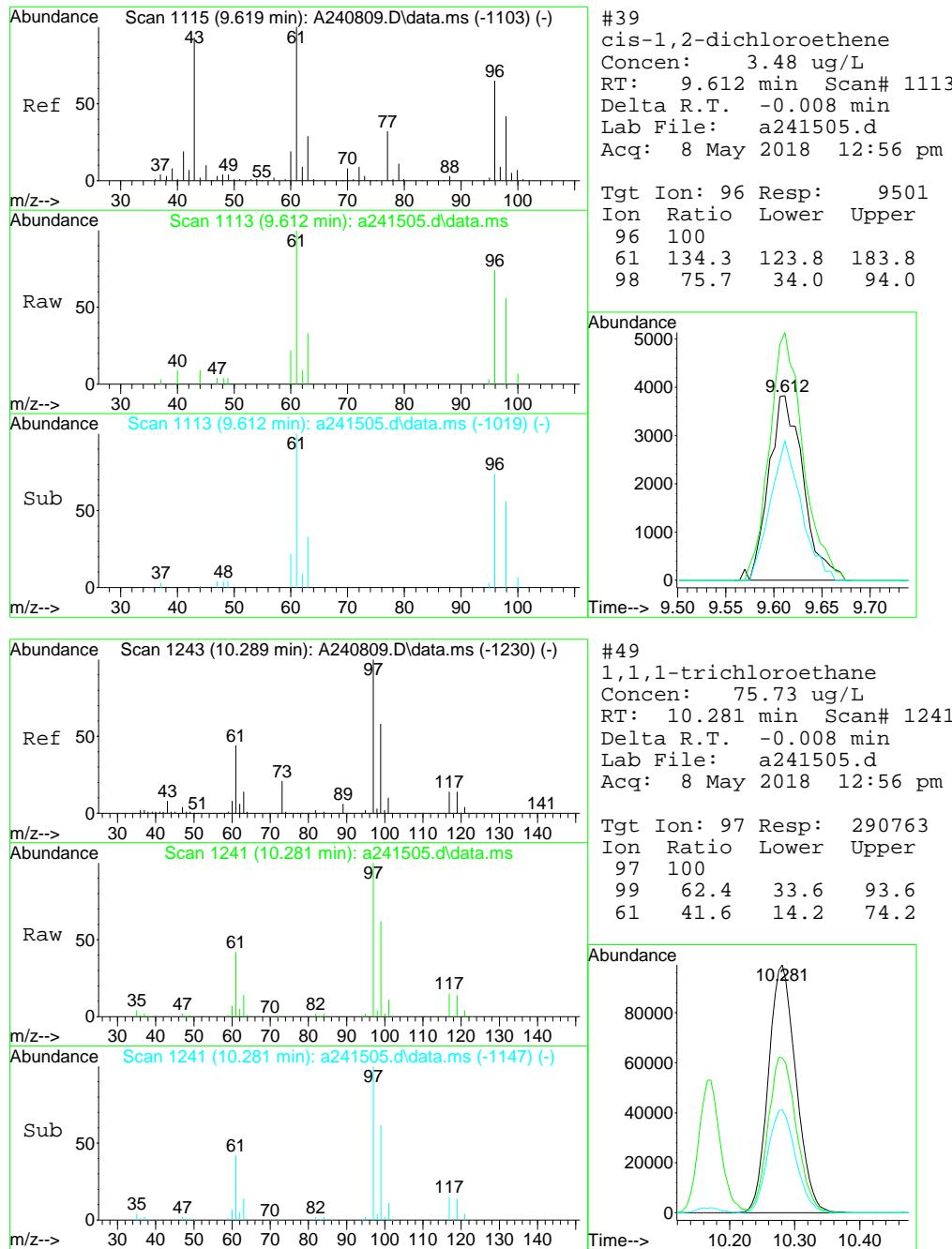
Quantitation Report (QT Reviewed)

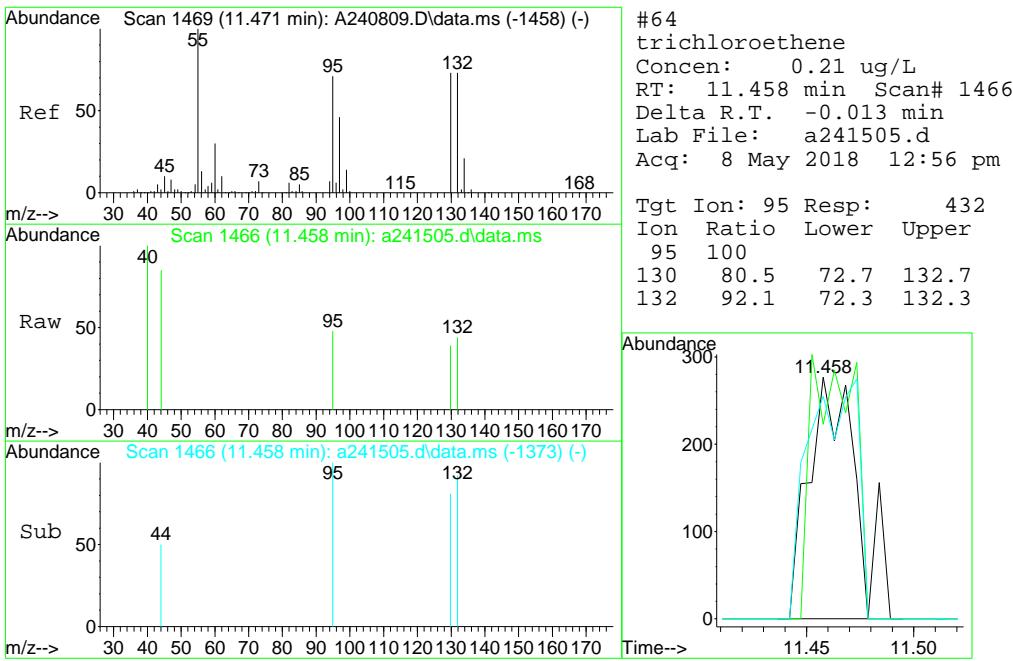
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241505.d
 Acq On : 8 May 2018 12:56 pm
 Operator : oyinadei
 Sample : JC65633-3 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 12 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:40:40 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241506.d
 Acq On : 8 May 2018 1:25 pm
 Operator : oyinadei
 Sample : JC65633-4 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:41:30 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

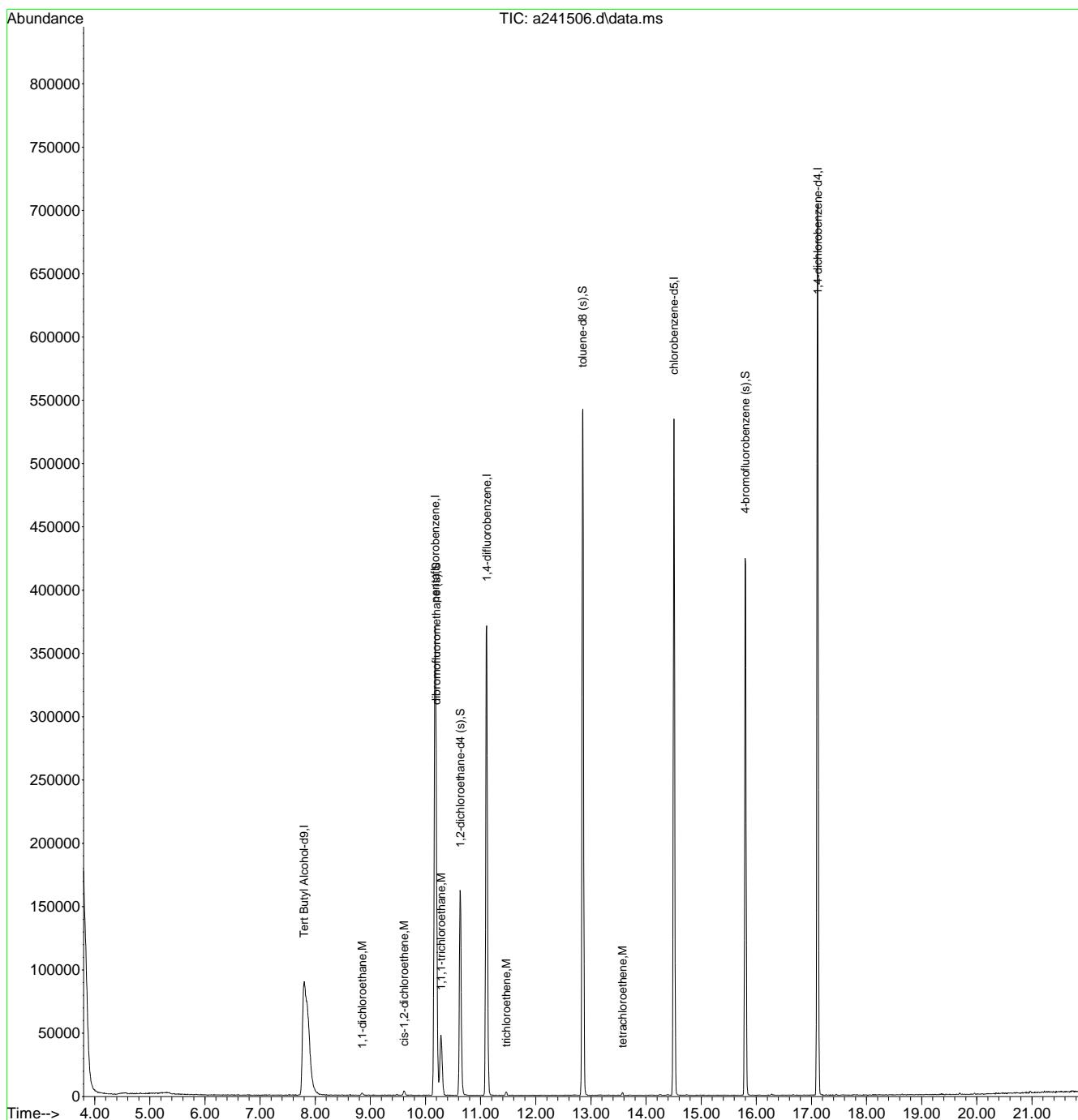
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.798	65	420832	500.00	ug/L	-0.01
5) pentafluorobenzene	10.172	168	258278	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.108	114	370389	50.00	ug/L	0.00
76) chlorobenzene-d5	14.508	117	333731	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.113	152	210299	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.193	113	131600	51.12	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	102.24%	
55) 1,2-dichloroethane-d4 (s)	10.632	65	130364	49.41	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	98.82%	
77) toluene-d8 (s)	12.850	98	409174	45.88	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.76%	
101) 4-bromofluorobenzene (s)	15.800	95	157040	45.84	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.68%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.849	63	2732	0.58	ug/L	81
39) cis-1,2-dichloroethene	9.607	96	2292	0.83	ug/L	# 67
49) 1,1,1-trichloroethane	10.282	97	47629	12.29	ug/L	94
64) trichloroethene	11.464	95	1289	0.61	ug/L	80
83) tetrachloroethene	13.572	166	852	0.38	ug/L	91

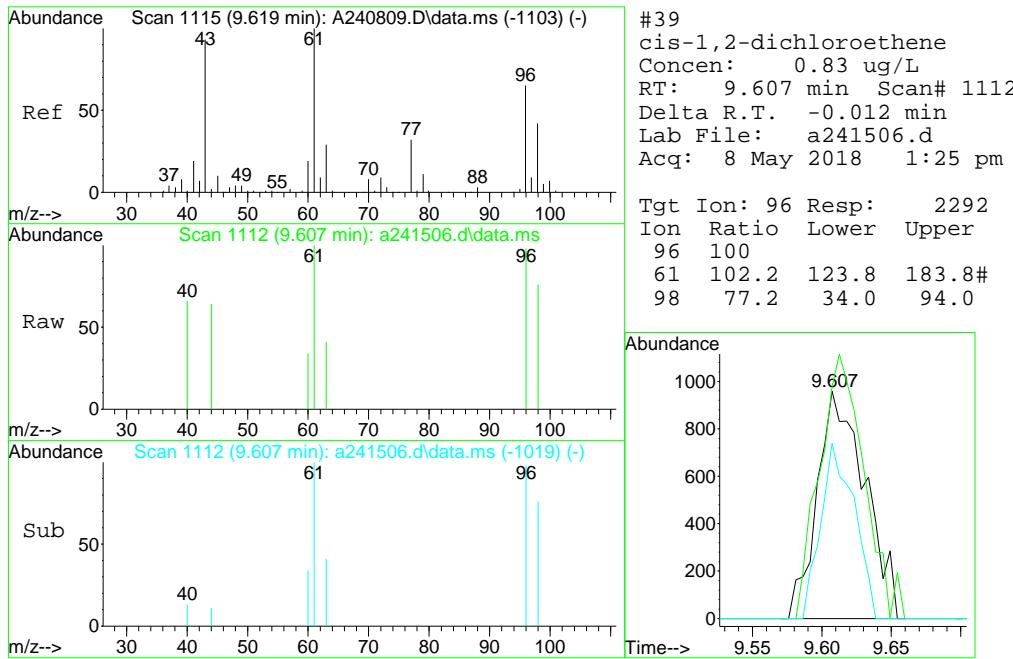
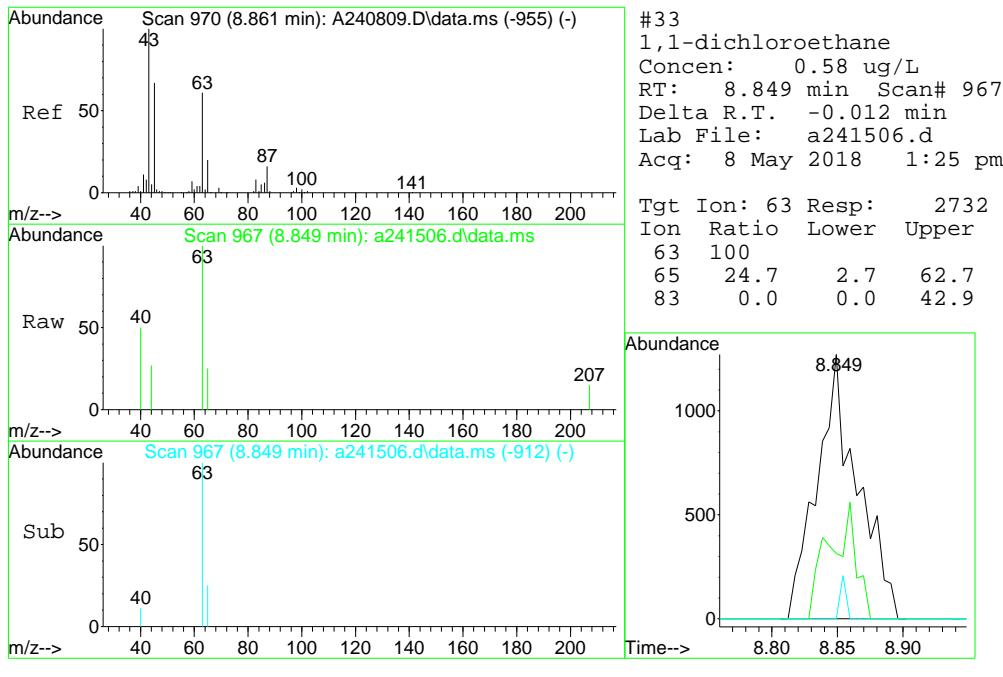
(#) = qualifier out of range (m) = manual integration (+) = signals summed

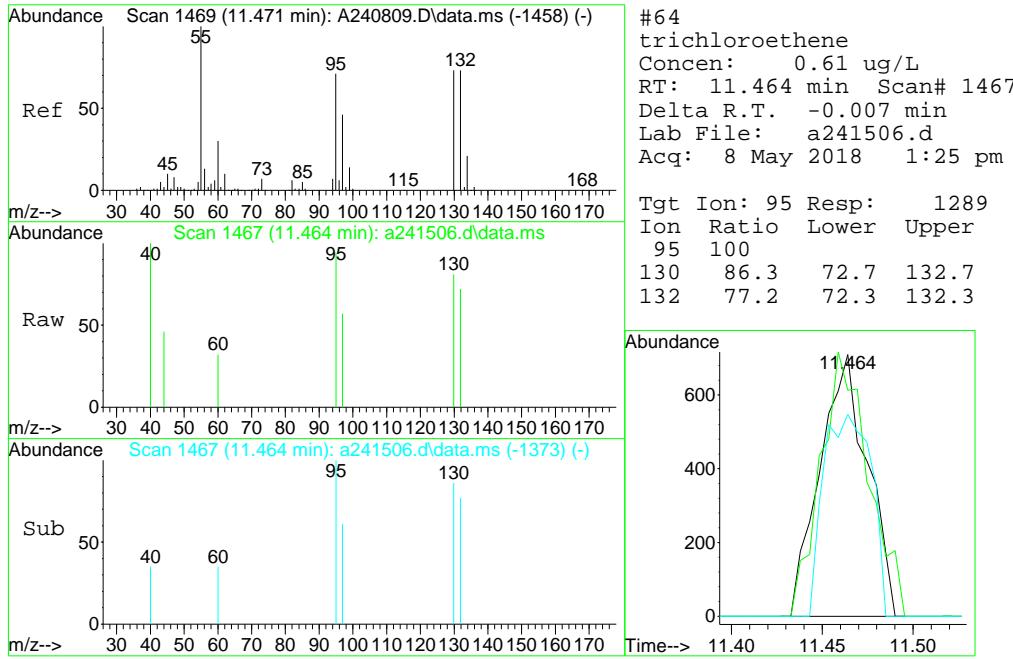
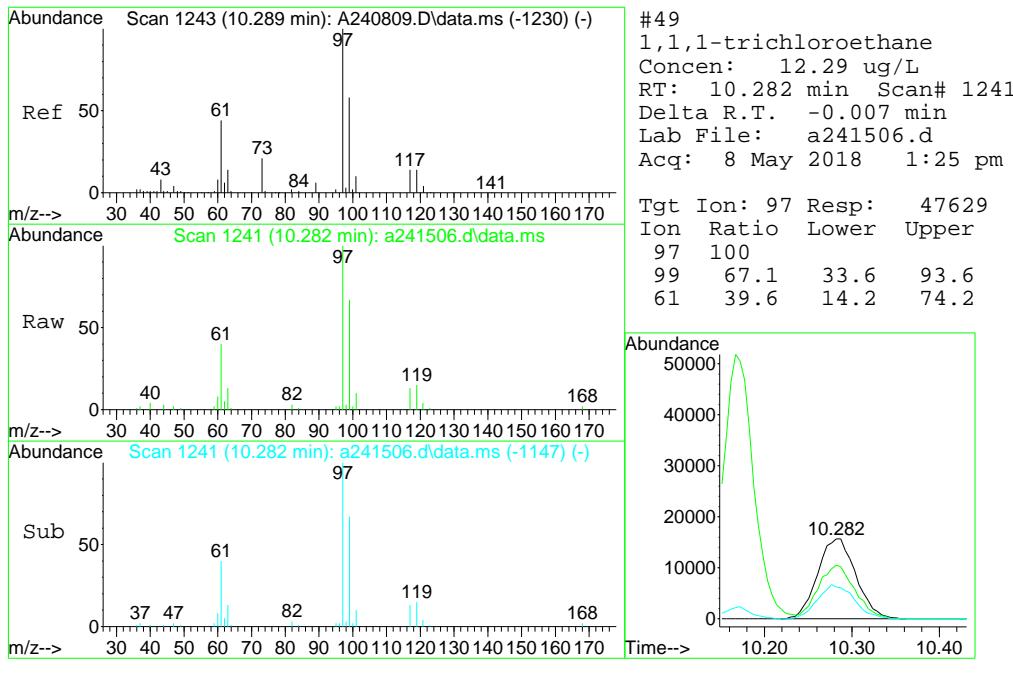
Quantitation Report (QT Reviewed)

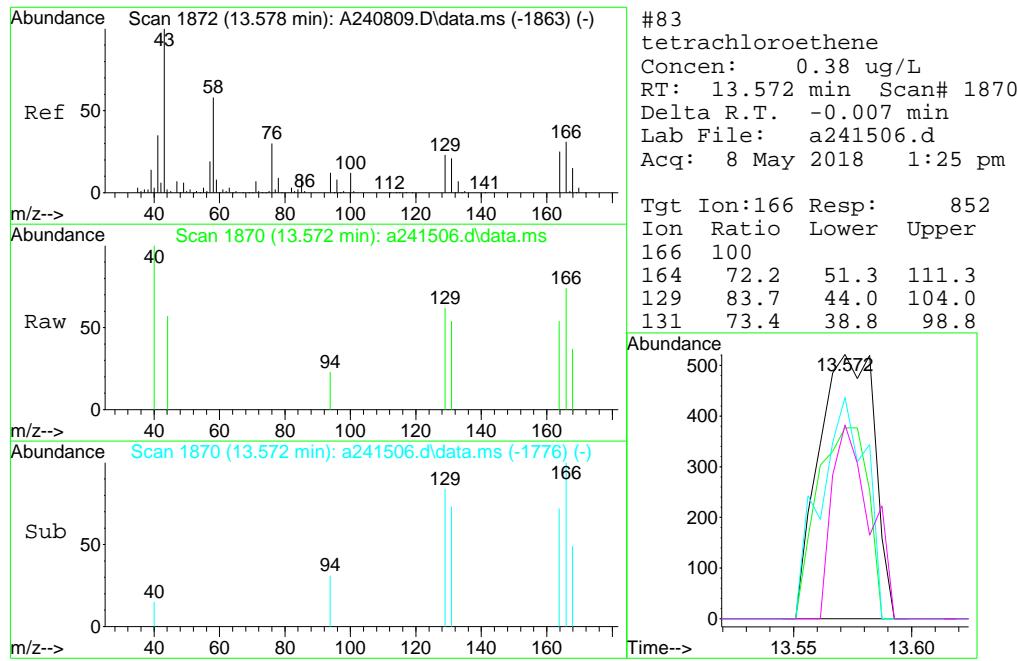
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241506.d
 Acq On : 8 May 2018 1:25 pm
 Operator : oyinadei
 Sample : JC65633-4
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 13 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:41:30 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241507.d
 Acq On : 8 May 2018 1:54 pm
 Operator : oyinadei
 Sample : JC65633-5 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:42:11 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.790	65	389089	500.00	ug/L	-0.02
5) pentafluorobenzene	10.170	168	244717	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.106	114	356947	50.00	ug/L	0.00
76) chlorobenzene-d5	14.505	117	332332	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.110	152	204905	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.191	113	123563	50.66	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.32%
55) 1,2-dichloroethane-d4 (s)	10.630	65	120923	47.56	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	95.12%
77) toluene-d8 (s)	12.853	98	394123	44.38	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	88.76%
101) 4-bromofluorobenzene (s)	15.802	95	151967	45.53	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	91.06%

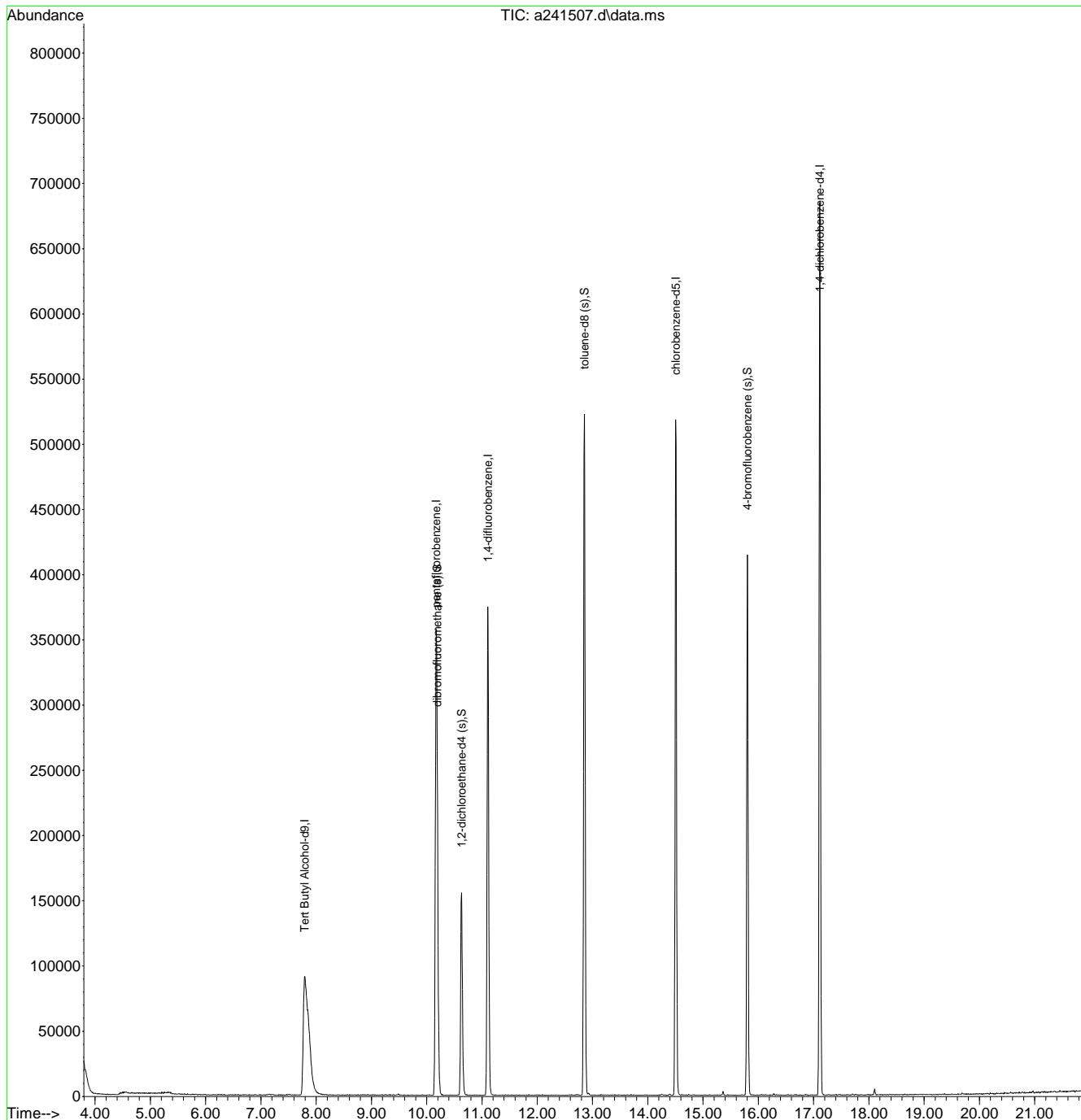
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241507.d
 Acq On : 8 May 2018 1:54 pm
 Operator : oyinadei
 Sample : JC65633-5 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:42:11 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241508.d
 Acq On : 8 May 2018 2:23 pm
 Operator : oyinadei
 Sample : JC65633-6 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:42:55 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

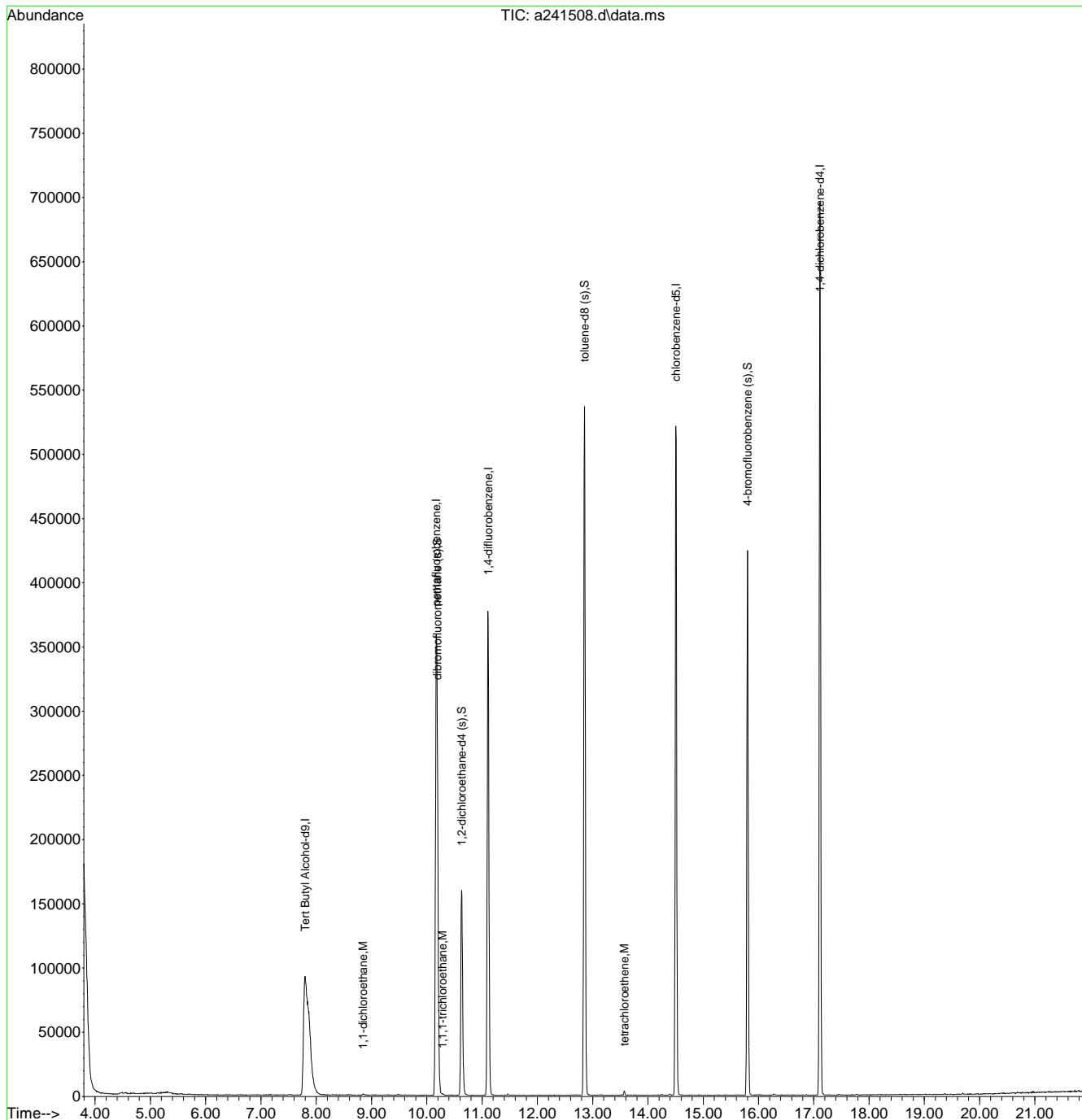
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.800	65	413269	500.00	ug/L	0.00
5) pentafluorobenzene	10.169	168	253957	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.110	114	364636	50.00	ug/L	0.00
76) chlorobenzene-d5	14.505	117	334781	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.109	152	206751	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	128289	50.68	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.36%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	126726	48.79	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	97.58%	
77) toluene-d8 (s)	12.852	98	402163	44.96	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	89.92%	
101) 4-bromofluorobenzene (s)	15.802	95	154877	45.99	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.98%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.846	63	992	0.21	ug/L	# 52
49) 1,1,1-trichloroethane	10.279	97	1167	0.31	ug/L	84
83) tetrachloroethene	13.574	166	1134	0.51	ug/L	# 71

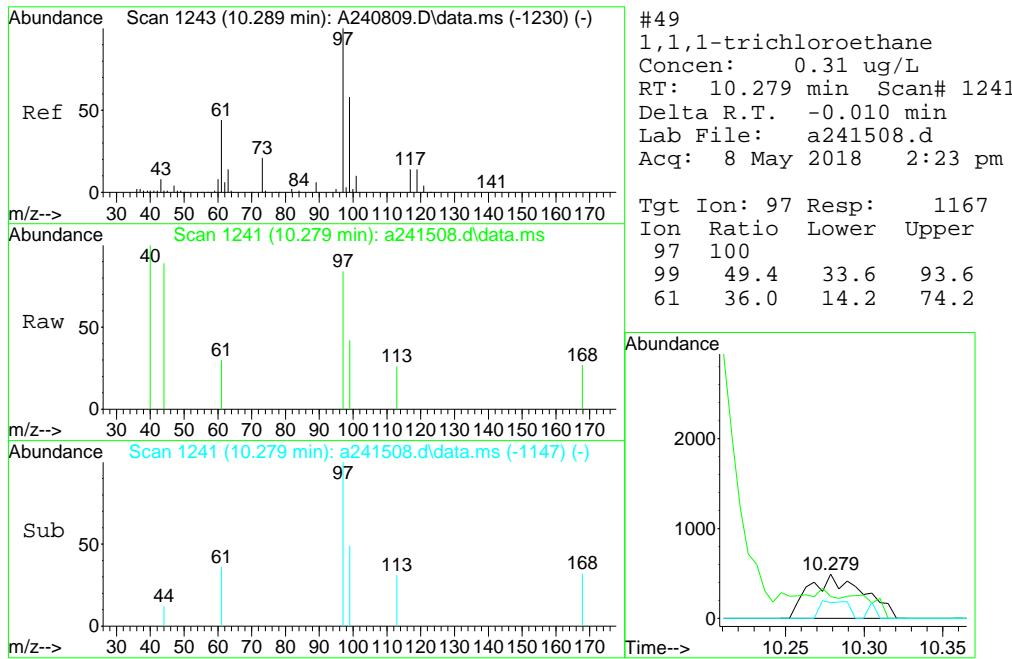
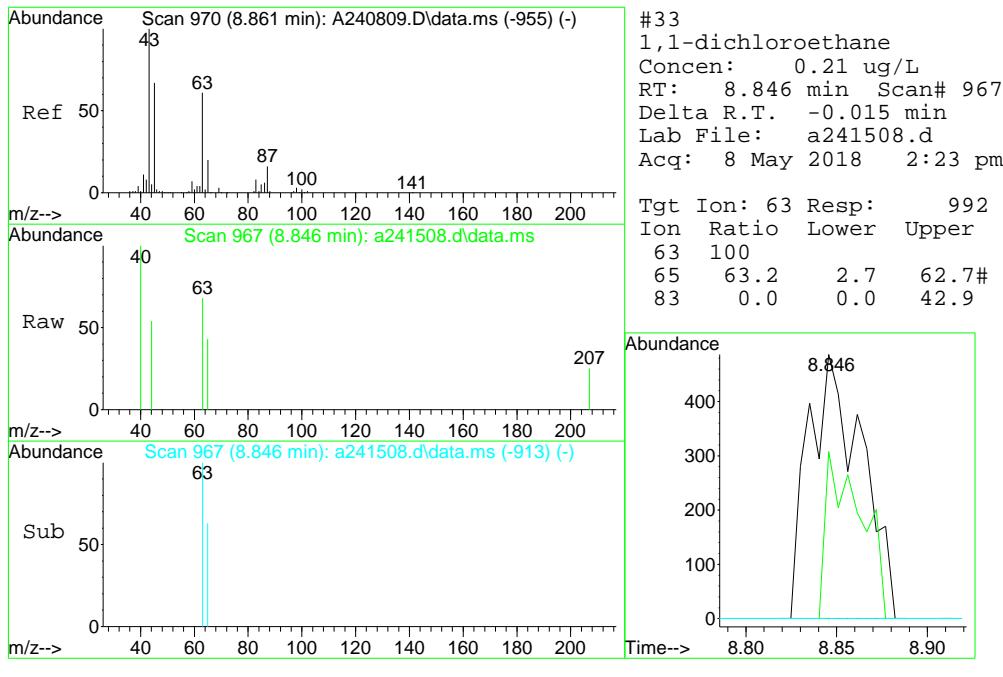
(#) = qualifier out of range (m) = manual integration (+) = signals summed

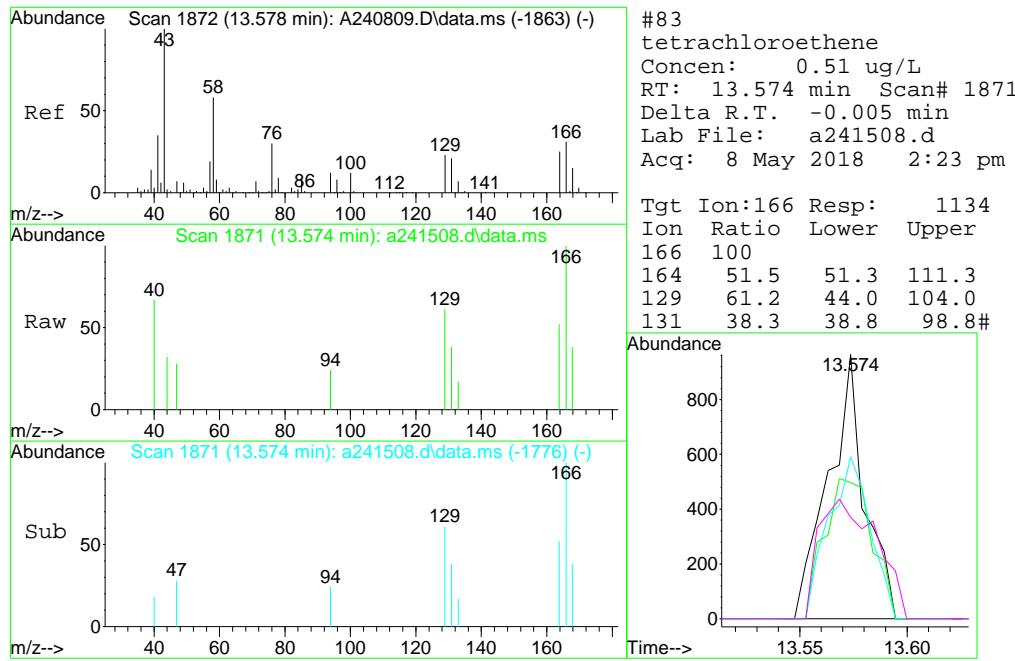
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241508.d
 Acq On : 8 May 2018 2:23 pm
 Operator : oyinadei
 Sample : JC65633-6 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:42:55 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241509.d
 Acq On : 8 May 2018 2:52 pm
 Operator : oyinadei
 Sample : JC65633-7 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:43:51 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

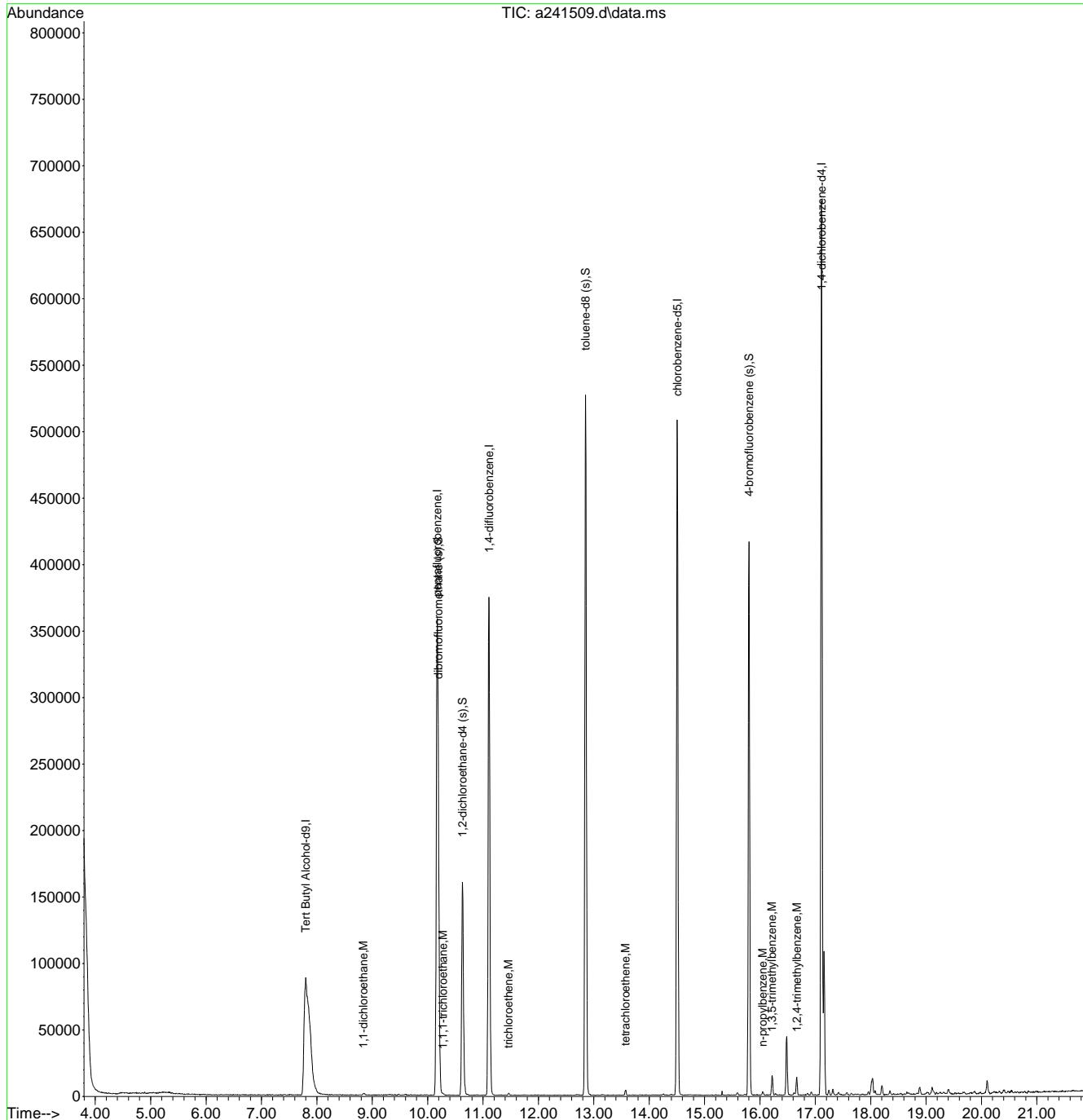
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.800	65	386122	500.00	ug/L	0.00
5) pentafluorobenzene	10.170	168	248780	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.106	114	364963	50.00	ug/L	0.00
76) chlorobenzene-d5	14.511	117	326629	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.110	152	200896	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.191	113	125722	50.70	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.40%	
55) 1,2-dichloroethane-d4 (s)	10.630	65	124418	47.86	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	95.72%	
77) toluene-d8 (s)	12.853	98	392351	44.95	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	89.90%	
101) 4-bromofluorobenzene (s)	15.802	95	148622	45.42	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	90.84%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.841	63	2221	0.49	ug/L	74
49) 1,1,1-trichloroethane	10.274	97	1197	0.32	ug/L	# 67
64) trichloroethene	11.456	95	490	0.24	ug/L	87
83) tetrachloroethene	13.569	166	1290	0.59	ug/L	91
106) n-propylbenzene	16.048	91	3010	0.22	ug/L	93
110) 1,3,5-trimethylbenzene	16.216	105	9194	0.86	ug/L	92
112) 1,2,4-trimethylbenzene	16.665	105	9041	0.87	ug/L	95

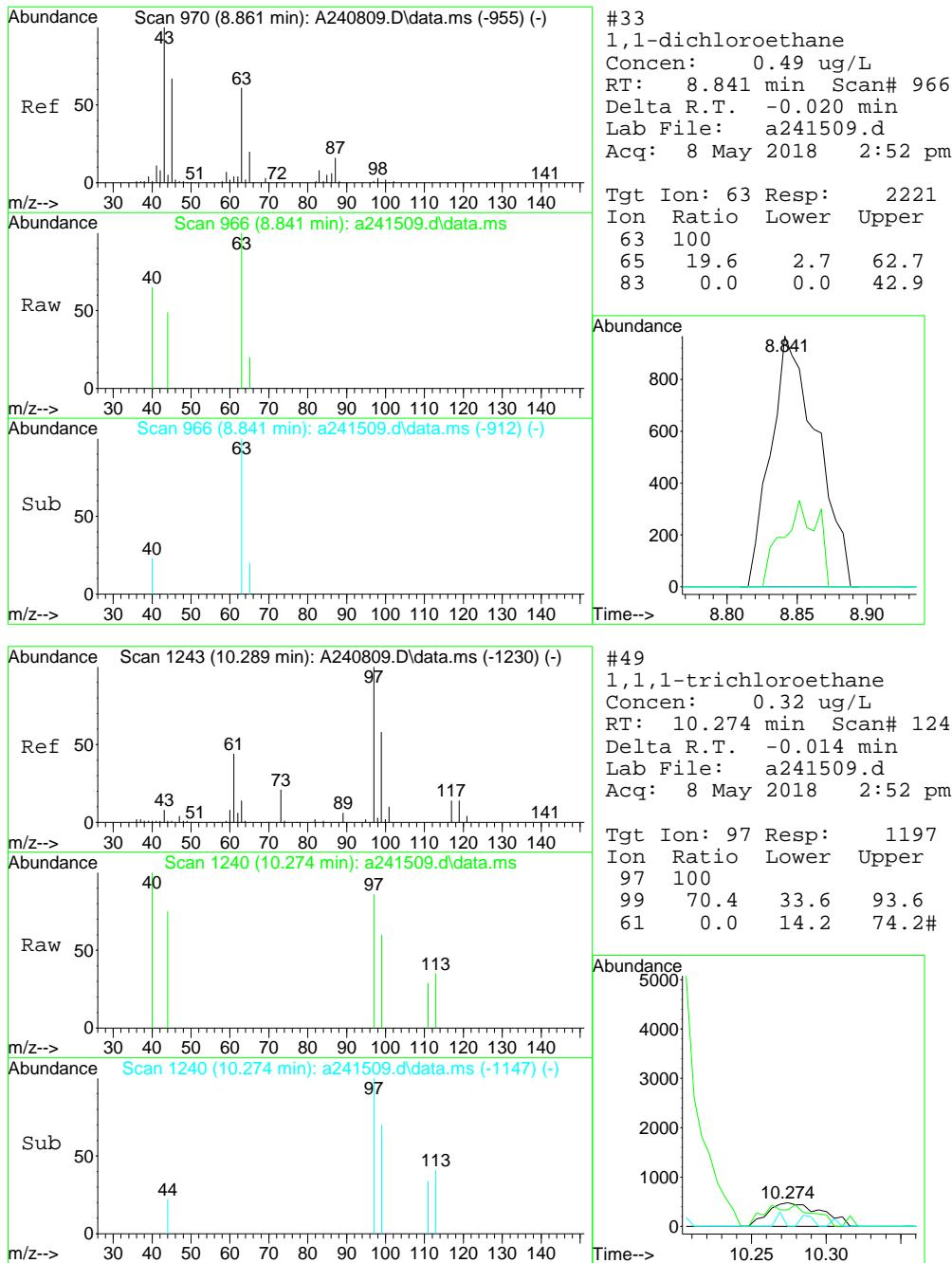
(#) = qualifier out of range (m) = manual integration (+) = signals summed

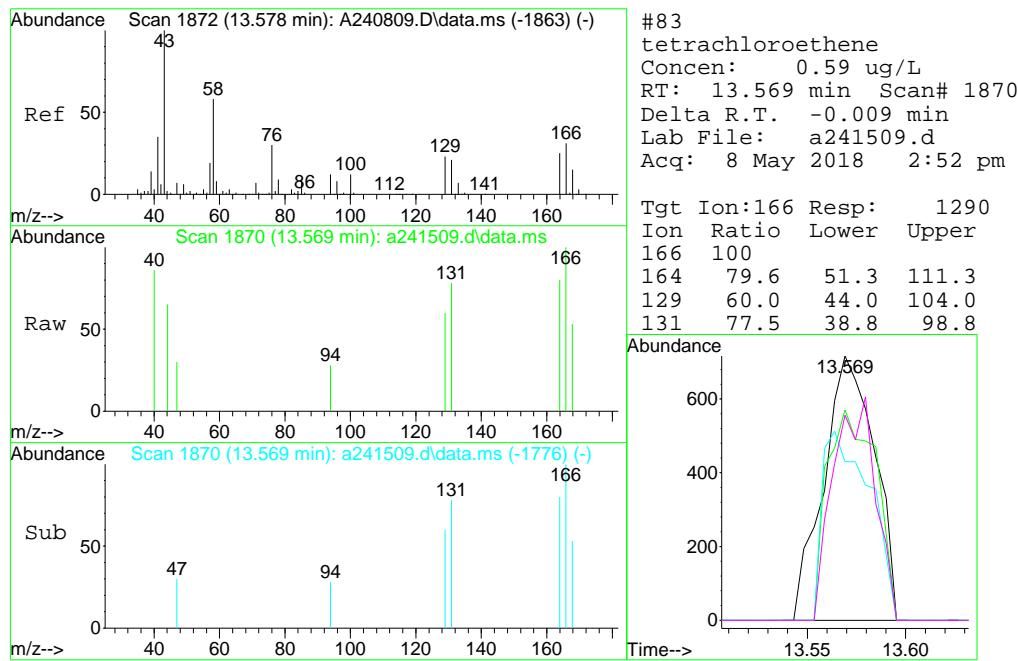
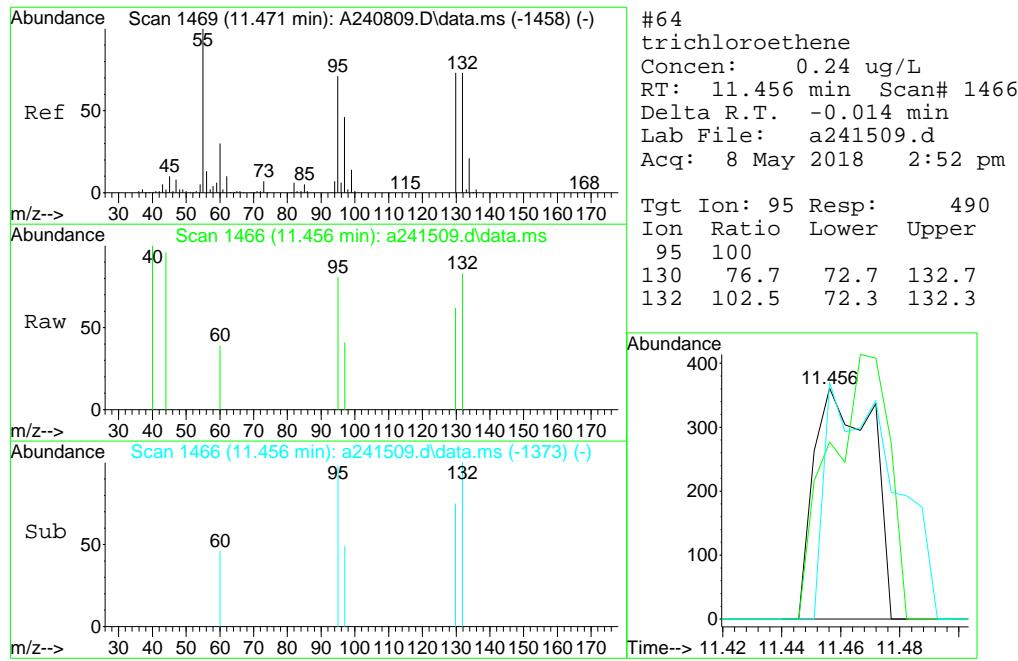
Quantitation Report (QT Reviewed)

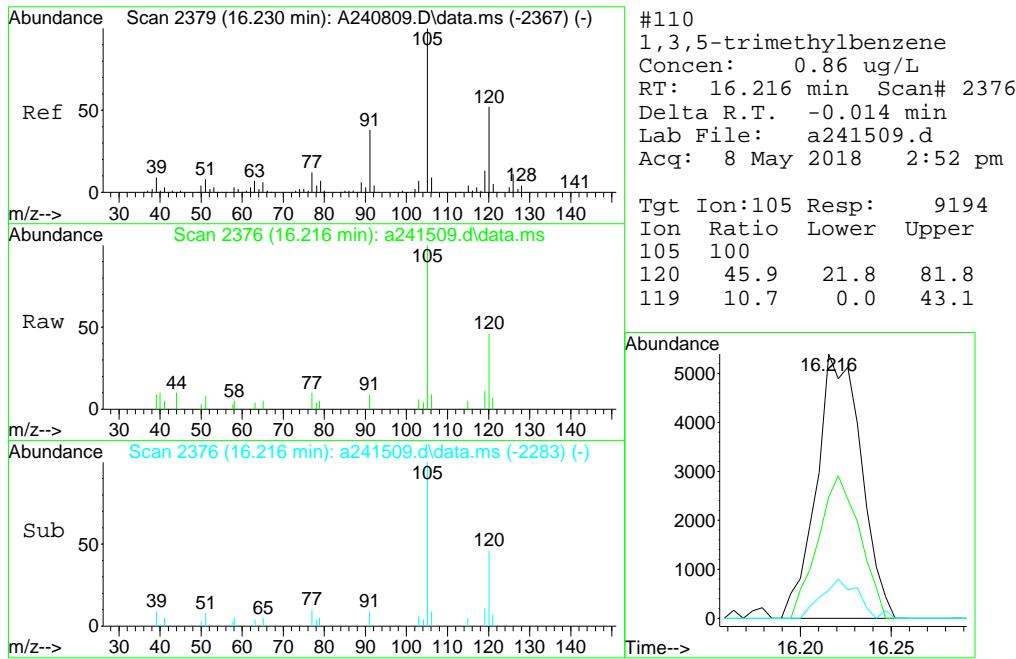
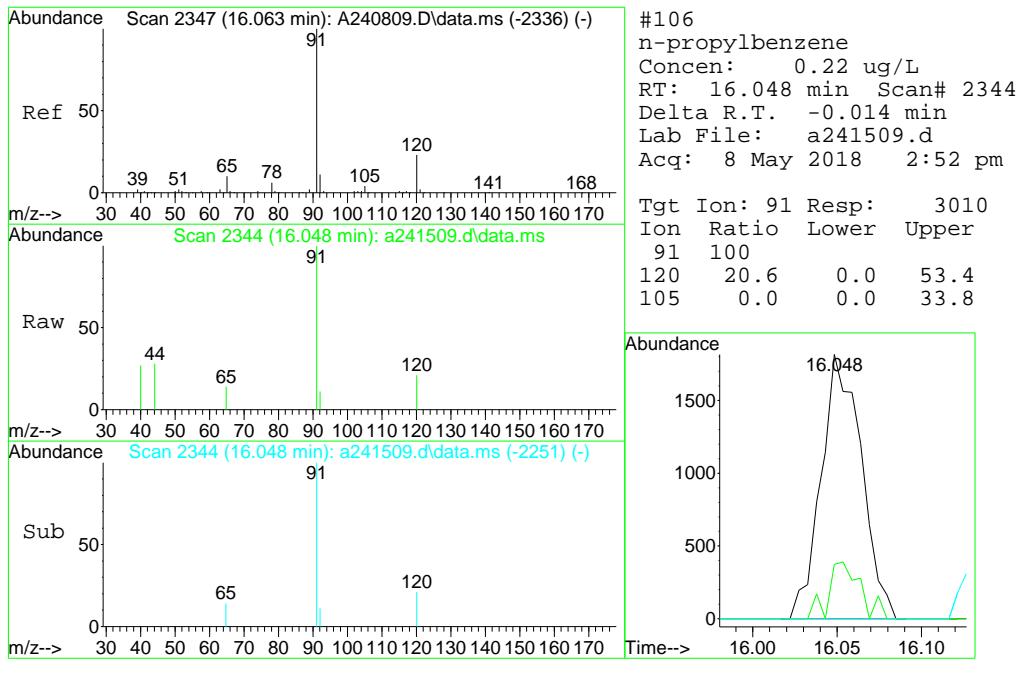
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241509.d
 Acq On : 8 May 2018 2:52 pm
 Operator : oyinadei
 Sample : JC65633-7 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 16 Sample Multiplier: 1

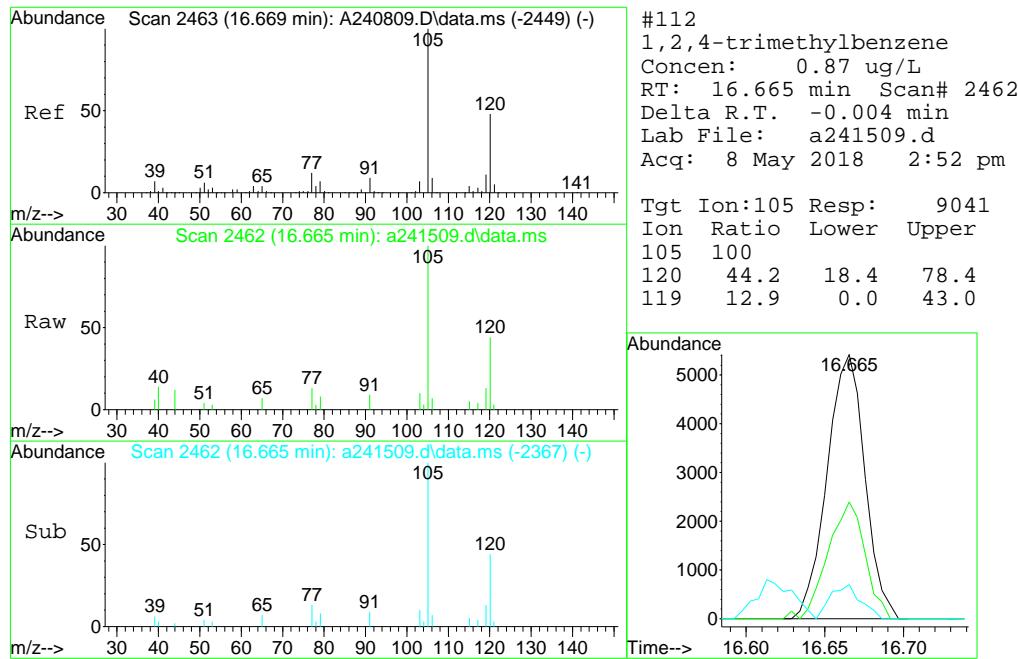
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:43:51 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration











Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241510.d
 Acq On : 8 May 2018 3:21 pm
 Operator : oyinadei
 Sample : JC65633-8 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:44:42 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

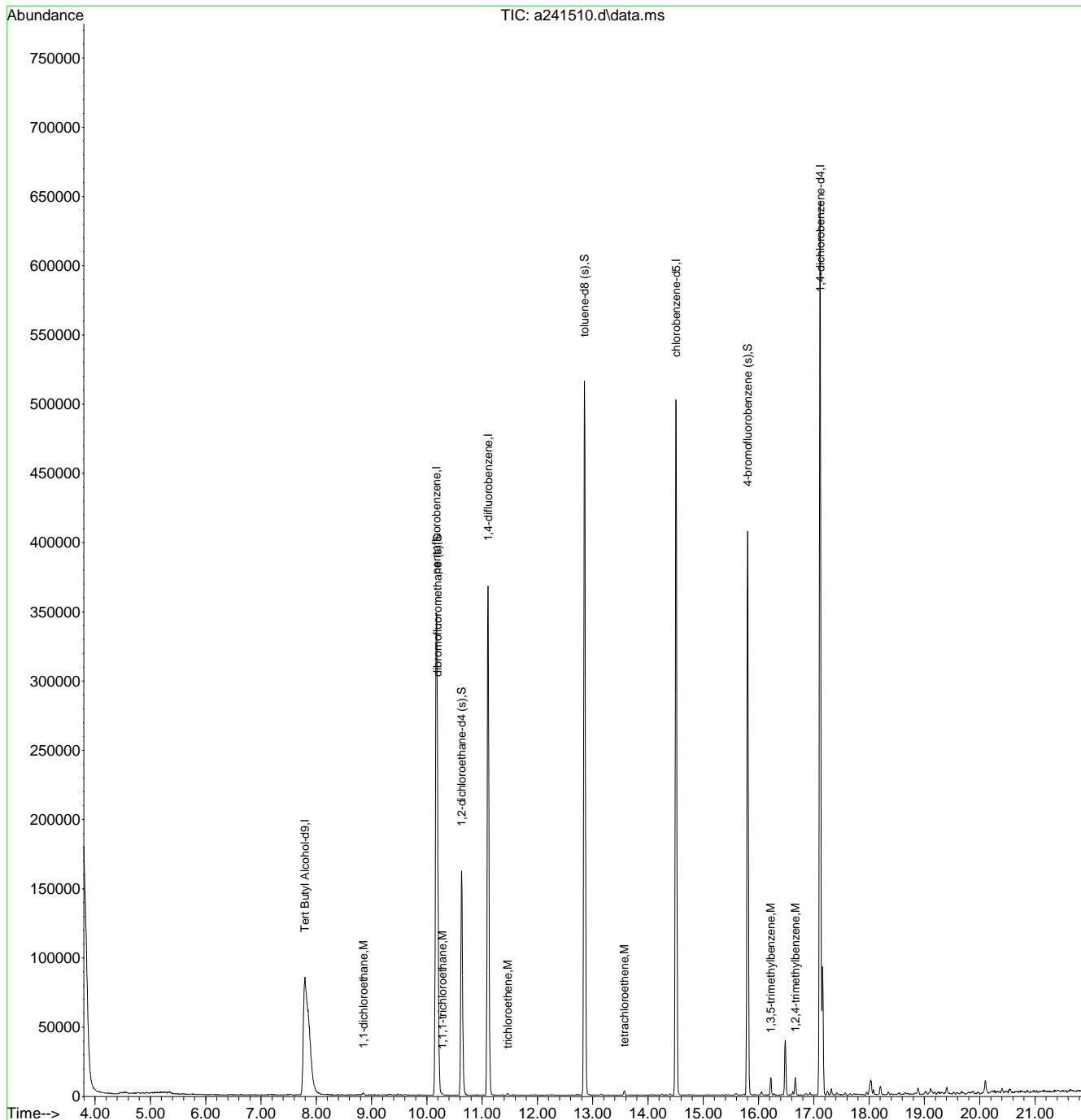
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	373223	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	248540	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.105	114	352474	50.00	ug/L	-0.01
76) chlorobenzene-d5	14.510	117	325700	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	195691	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	123821	49.98	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.96%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	122914	48.95	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	97.90%	
77) toluene-d8 (s)	12.852	98	388804	44.68	ug/L	-0.01
Spiked Amount 50.000	Range 80 - 120		Recovery	=	89.36%	
101) 4-bromofluorobenzene (s)	15.802	95	147648	46.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	92.64%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.851	63	1951	0.43	ug/L	83
49) 1,1,1-trichloroethane	10.278	97	1172	0.31	ug/L	84
64) trichloroethene	11.460	95	483	0.24	ug/L	95
83) tetrachloroethene	13.568	166	1164	0.54	ug/L	93
110) 1,3,5-trimethylbenzene	16.220	105	8649	0.83	ug/L	90
112) 1,2,4-trimethylbenzene	16.664	105	8018	0.79	ug/L	96

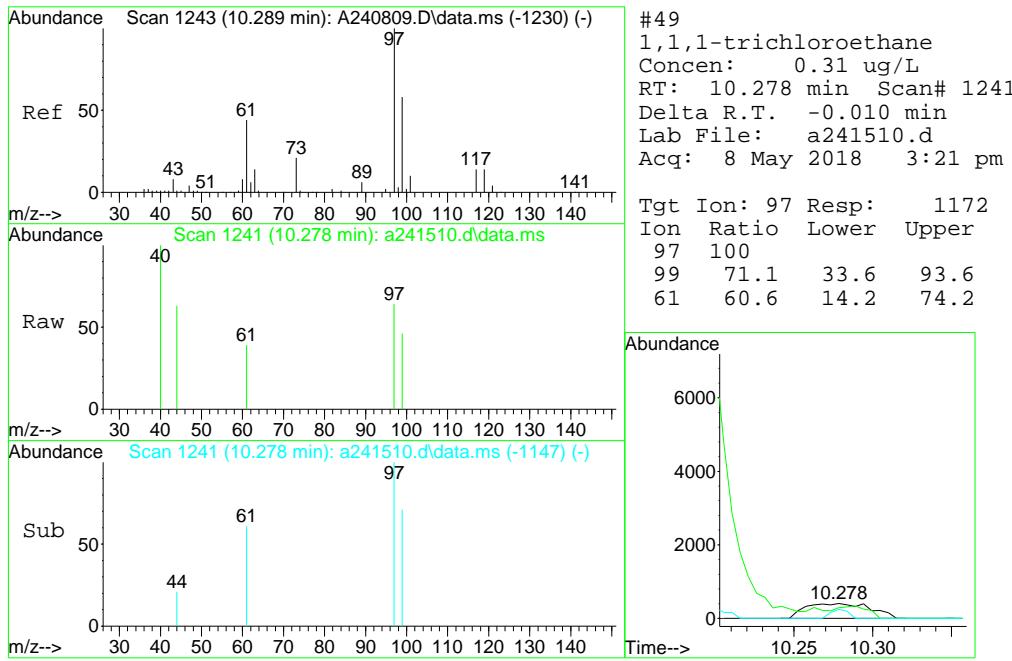
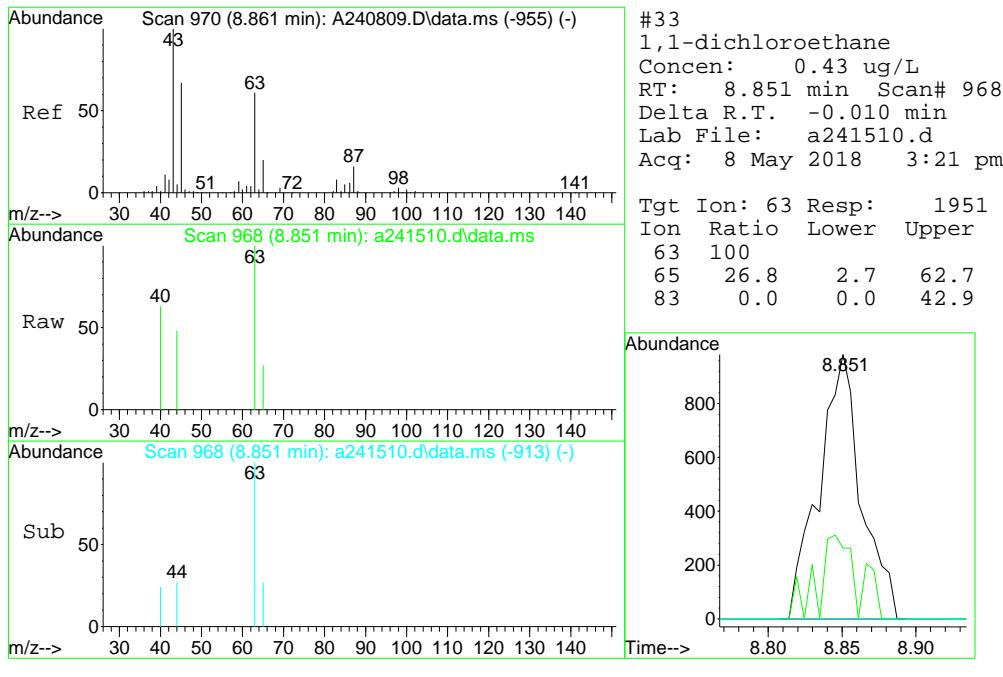
(#) = qualifier out of range (m) = manual integration (+) = signals summed

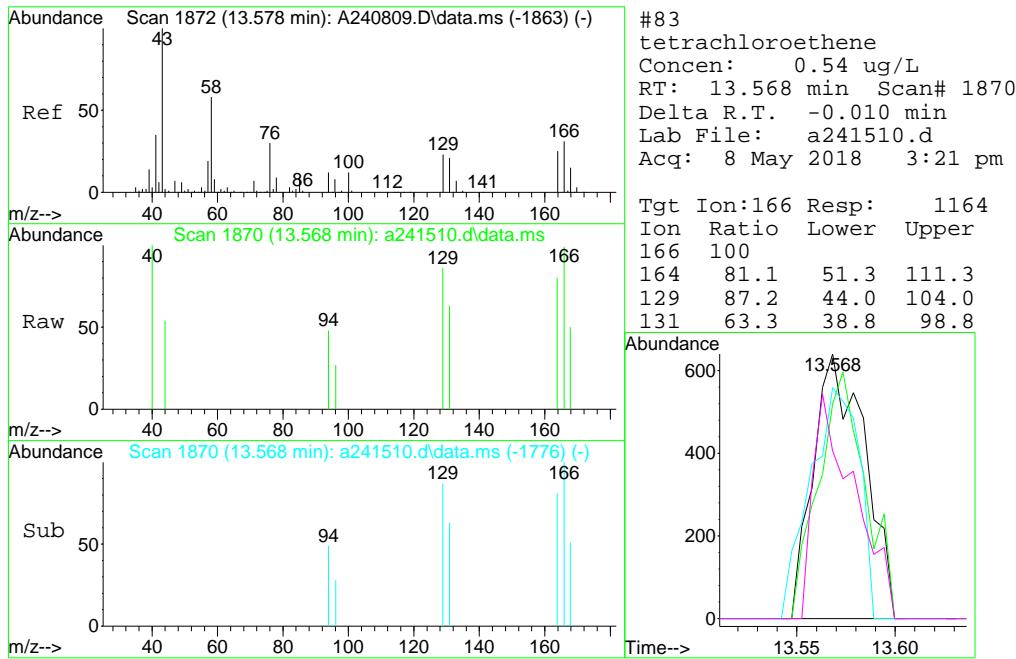
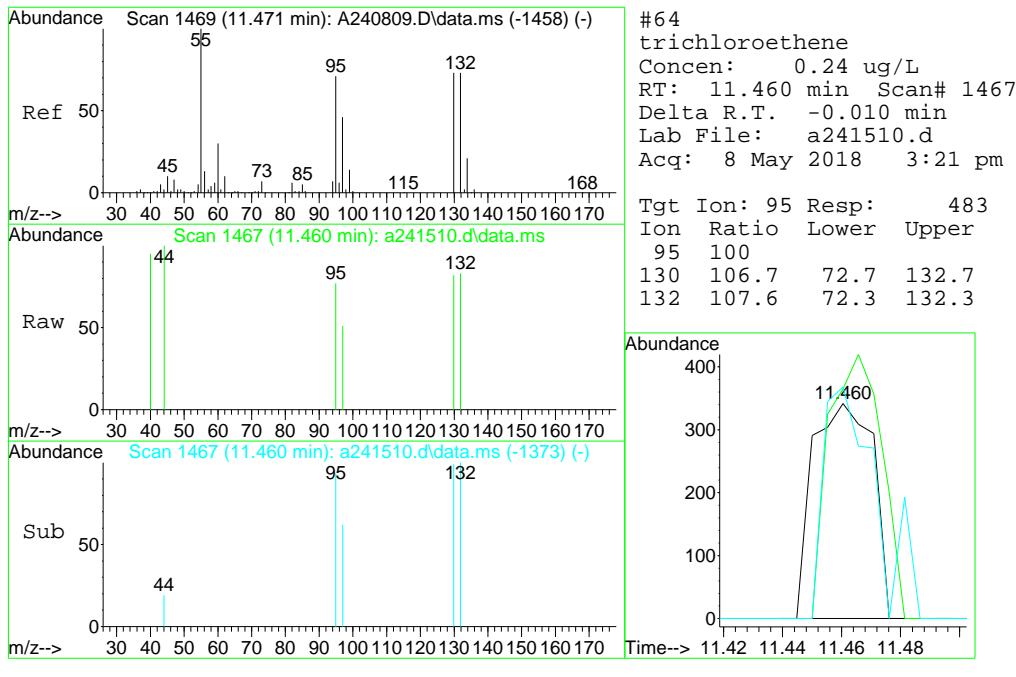
Quantitation Report (QT Reviewed)

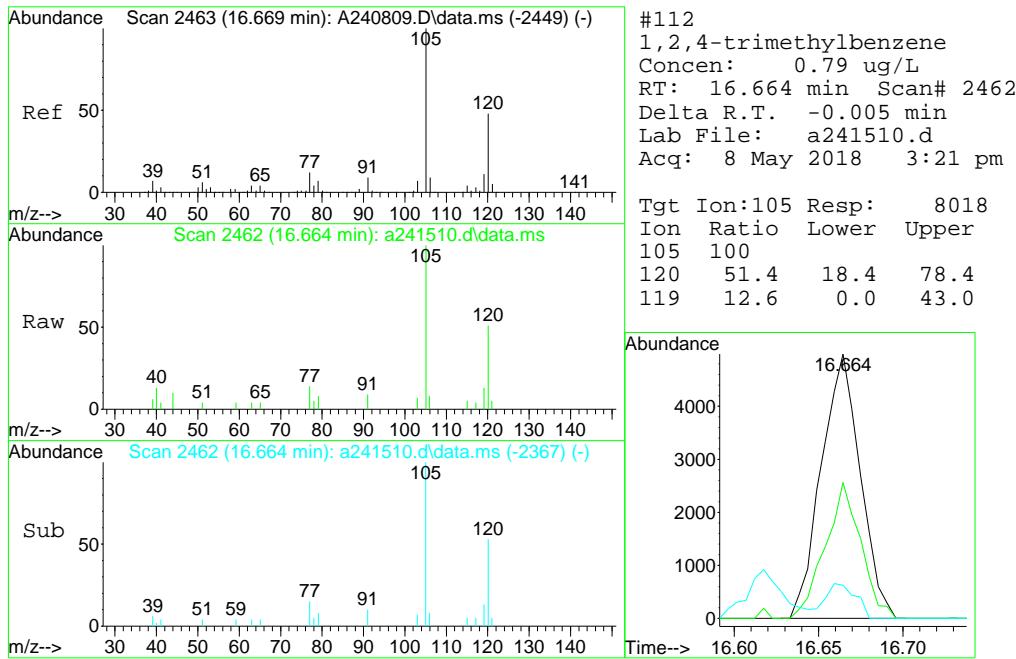
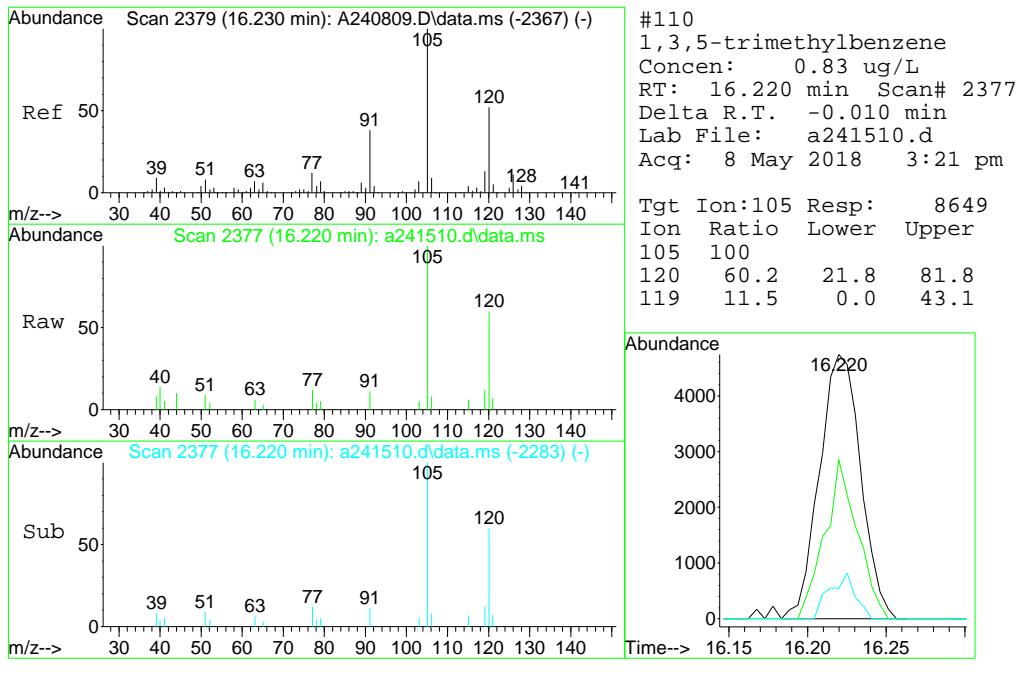
Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241510.d
 Acq On : 8 May 2018 3:21 pm
 Operator : oyinadei
 Sample : JC65633-8
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 17 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:44:42 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration









Quantitation Report (QT Reviewed)

Data Path : R:\complete\2018\dayton201805\05-09-18\janellec\va9204\
 Data File : a241499.d
 Acq On : 8 May 2018 9:56 am
 Operator : oyinadei
 Sample : JC65633-9
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 21 08:42:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

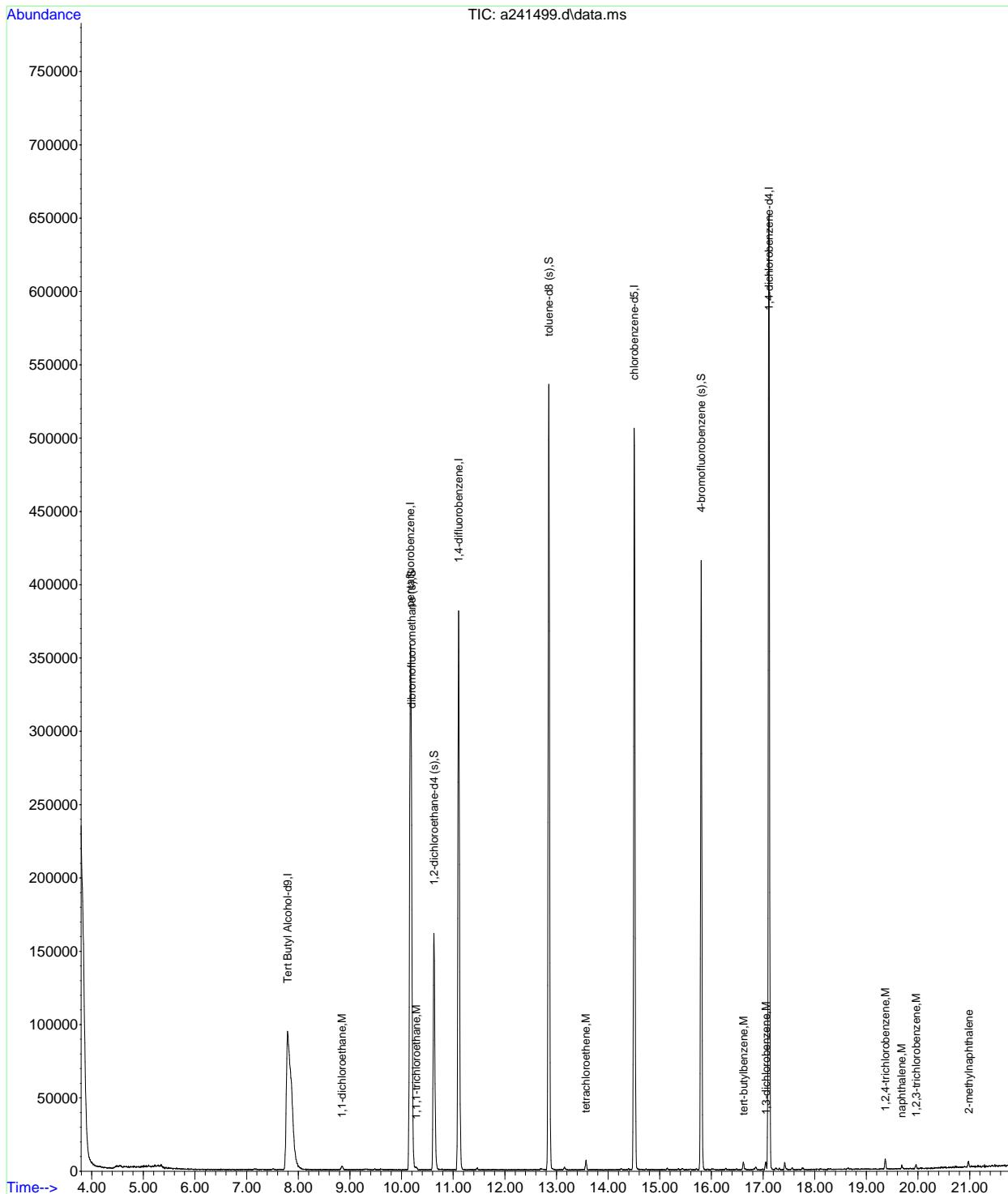
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	394717	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	258780	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.105	114	361606	50.00	ug/L	0.00
76) chlorobenzene-d5	14.505	117	324190	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.115	152	200329	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	128523	49.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	99.66%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	123629	47.99	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	95.98%	
77) toluene-d8 (s)	12.852	98	395773	45.69	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.38%	
101) 4-bromofluorobenzene (s)	15.802	95	149023	45.67	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.34%	
Target Compounds						
33) 1,1-dichloroethane	8.846	63	3404	0.72	ug/L	96
49) 1,1,1-trichloroethane	10.284	97	2077	0.54	ug/L	85
83) tetrachloroethene	13.569	166	2269	1.05	ug/L	83
111) tert-butylbenzene	16.623	134	767	0.35	ug/L #	49
114) 1,3-dichlorobenzene	17.057	146	2783	0.55	ug/L	93
124) 1,2,4-trichlorobenzene	19.369	180	3111	0.68	ug/L	91
126) naphthalene	19.683	128	2900	0.25	ug/L	96
127) 1,2,3-trichlorobenzene	19.965	180	1350	0.33	ug/L #	63
129) 2-methylnaphthalene	20.980	142	2595	0.57	ug/L	97

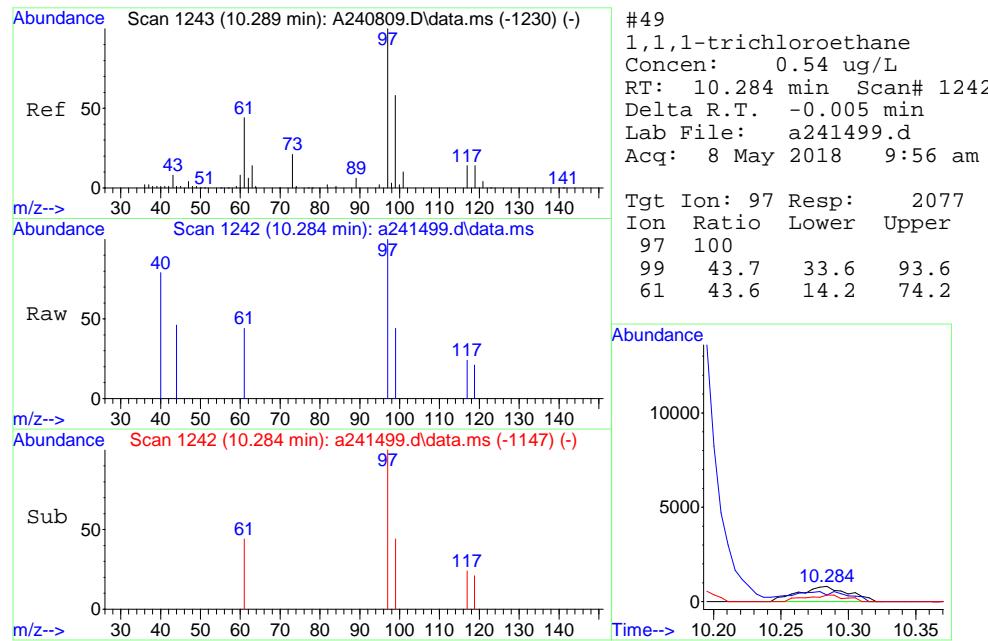
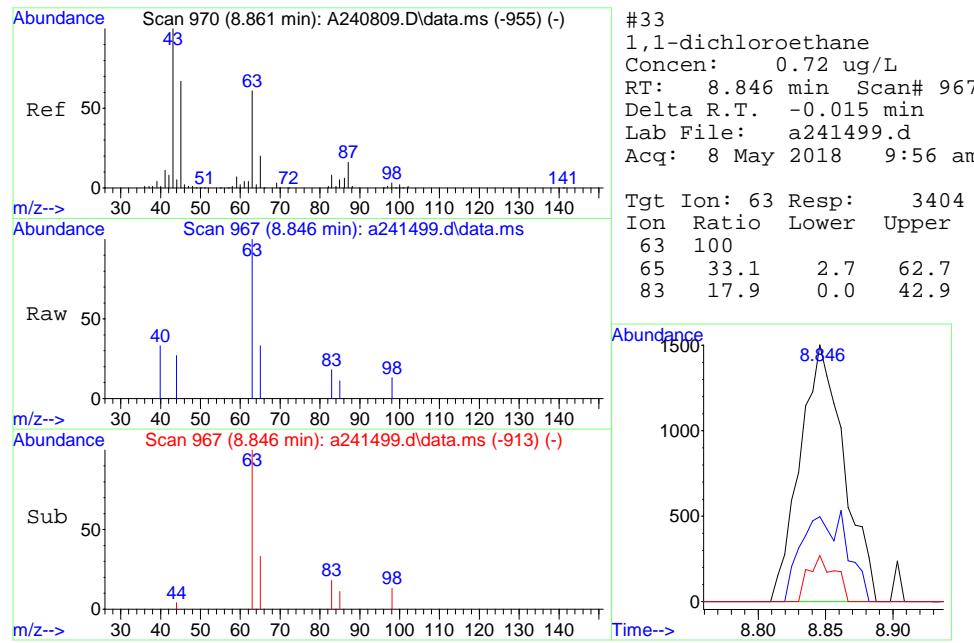
(#) = qualifier out of range (m) = manual integration (+) = signals summed

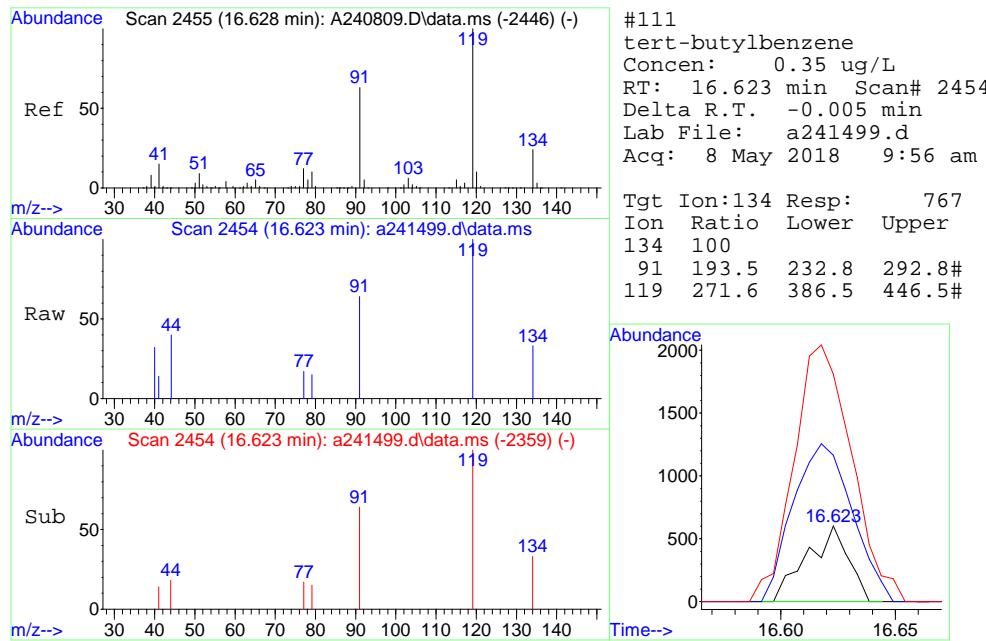
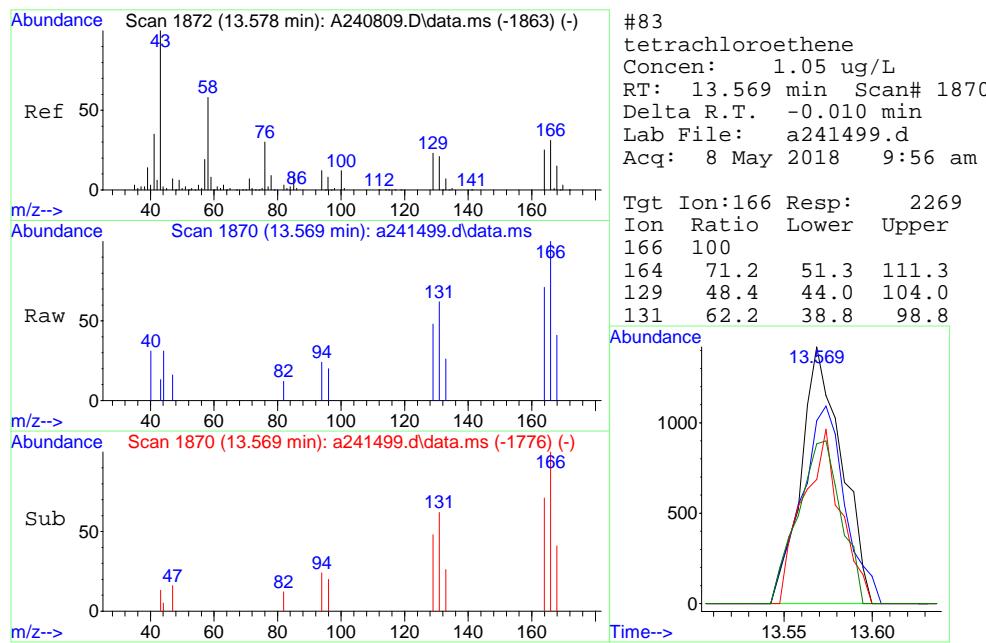
Quantitation Report (QT Reviewed)

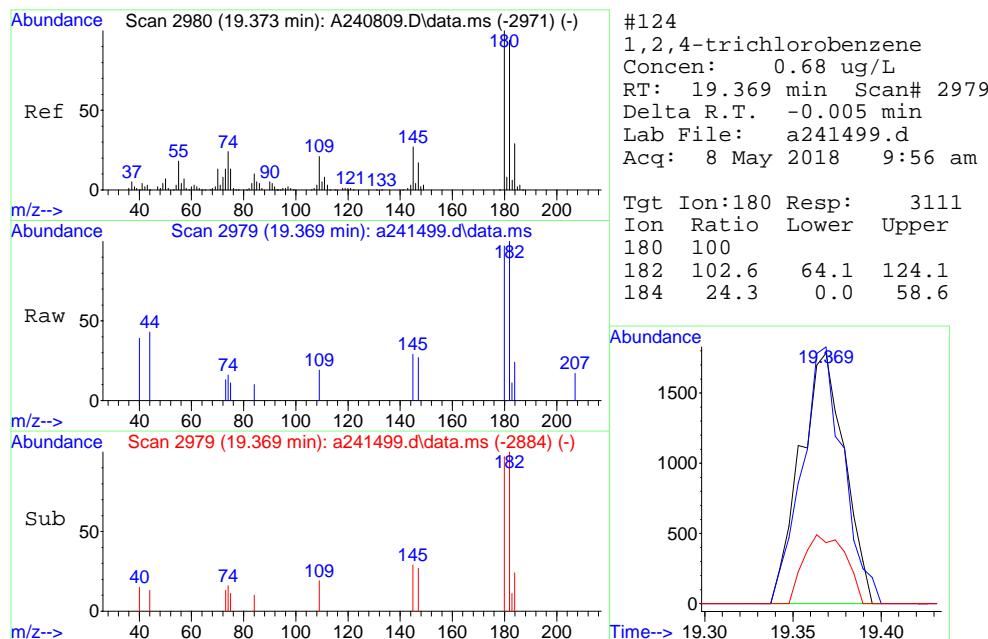
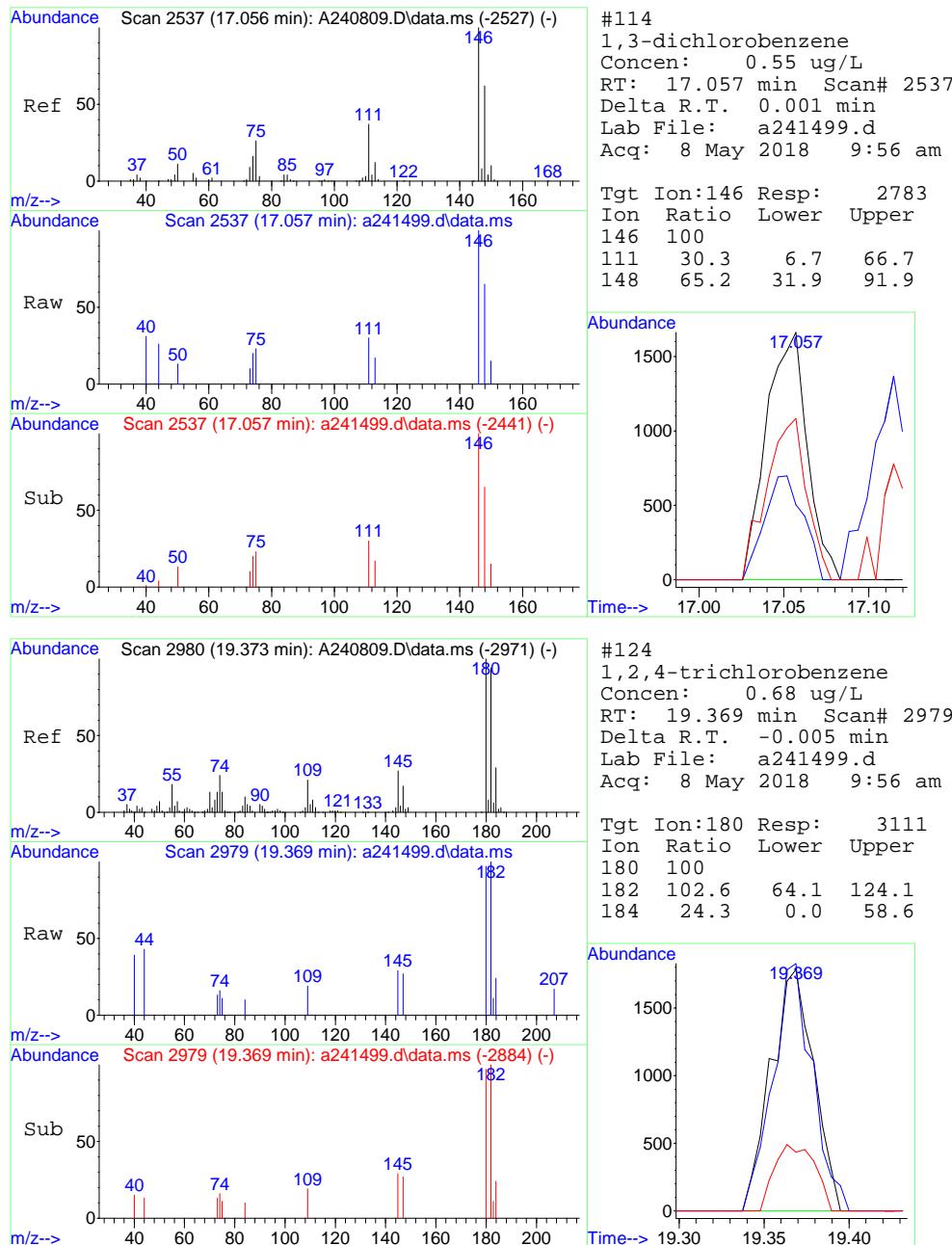
Data Path : R:\complete\2018\dayton201805\05-09-18\janellec\va9204\
 Data File : a241499.d
 Acq On : 8 May 2018 9:56 am
 Operator : oyinadei
 Sample : JC65633-9
 Misc : MS26140,VA9204,5,,,,1
 ALS Vial : 6 Sample Multiplier: 1

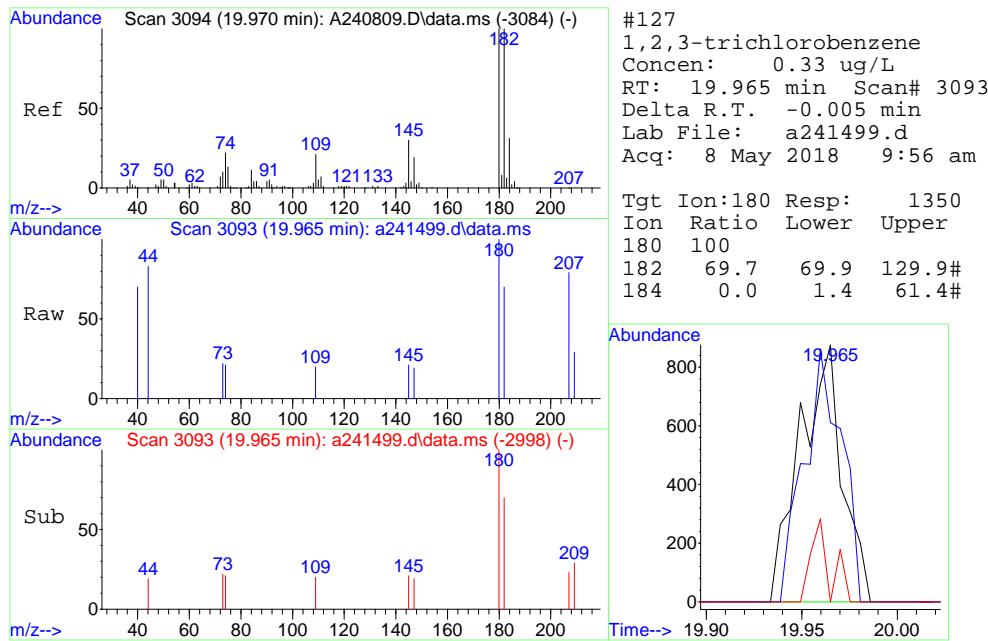
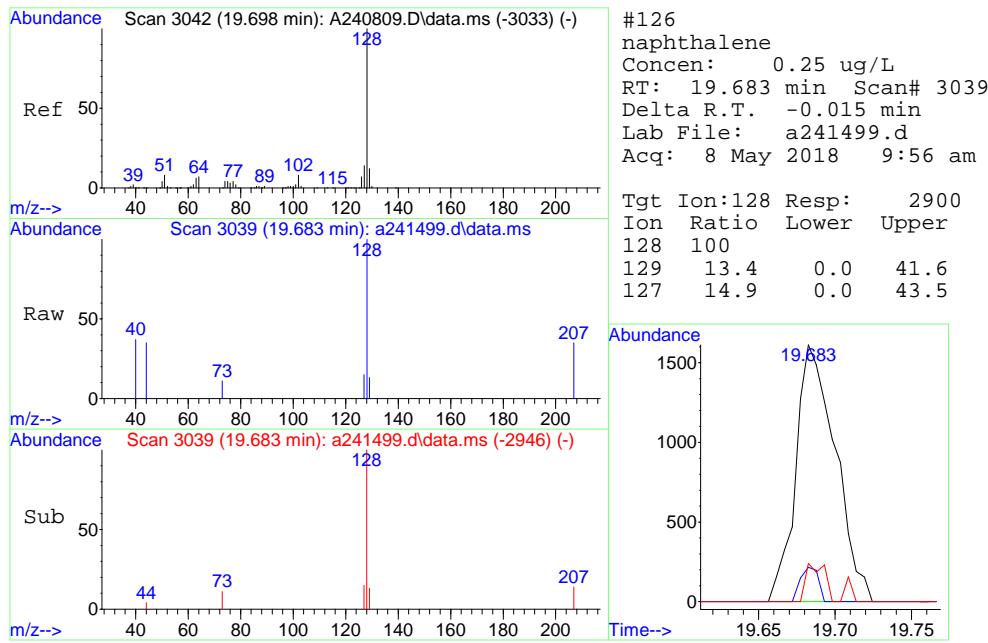
Quant Time: May 21 08:42:09 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

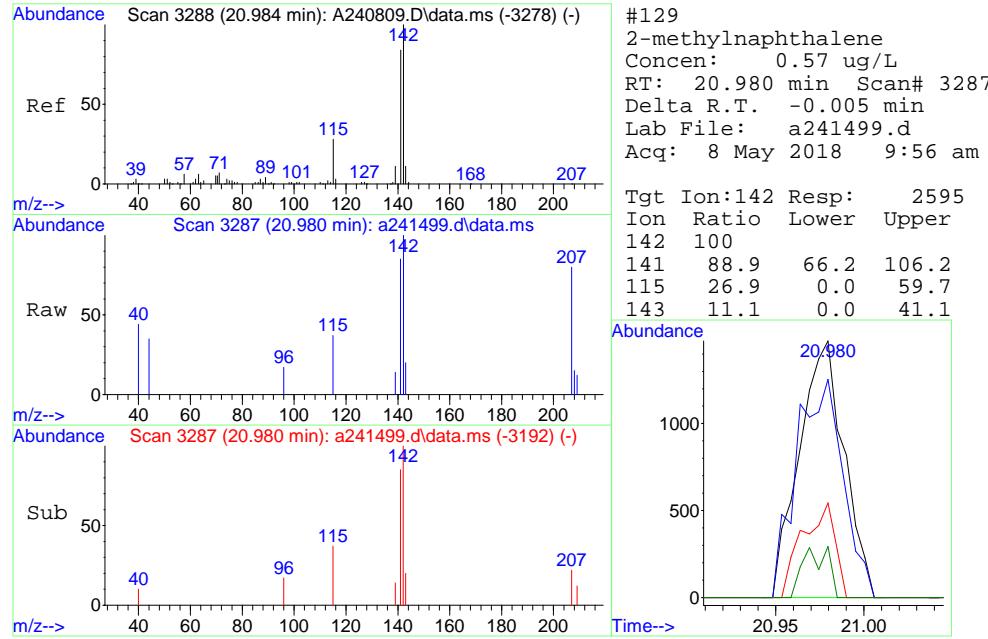












Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241511.d
 Acq On : 8 May 2018 3:51 pm
 Operator : oyinadei
 Sample : JC65633-10 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:45:29 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.791	65	402737	500.00	ug/L	-0.02
5) pentafluorobenzene	10.171	168	249350	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.107	114	364075	50.00	ug/L	0.00
76) chlorobenzene-d5	14.507	117	323340	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.111	152	202382	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	126876	51.05	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.10%
55) 1,2-dichloroethane-d4 (s)	10.631	65	124560	48.03	ug/L	-0.01
Spiked Amount	50.000	Range	81 - 124	Recovery	=	96.06%
77) toluene-d8 (s)	12.854	98	394385	45.65	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	91.30%
101) 4-bromofluorobenzene (s)	15.799	95	150720	45.72	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	91.44%

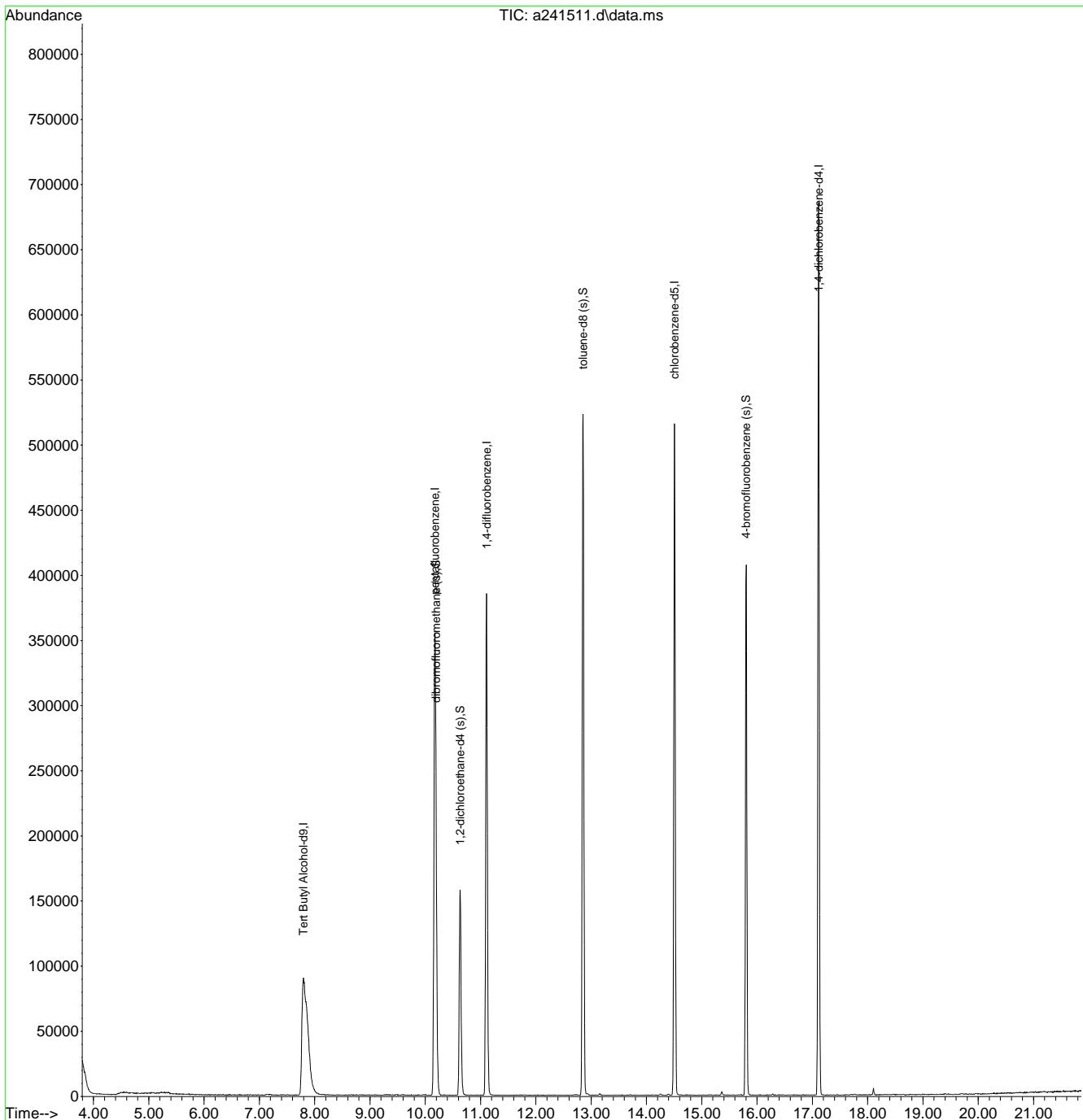
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241511.d
 Acq On : 8 May 2018 3:51 pm
 Operator : oyinadei
 Sample : JC65633-10 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 18 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:45:29 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241512.d
 Acq On : 8 May 2018 4:20 pm
 Operator : oyinadei
 Sample : JC65633-11 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:46:17 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

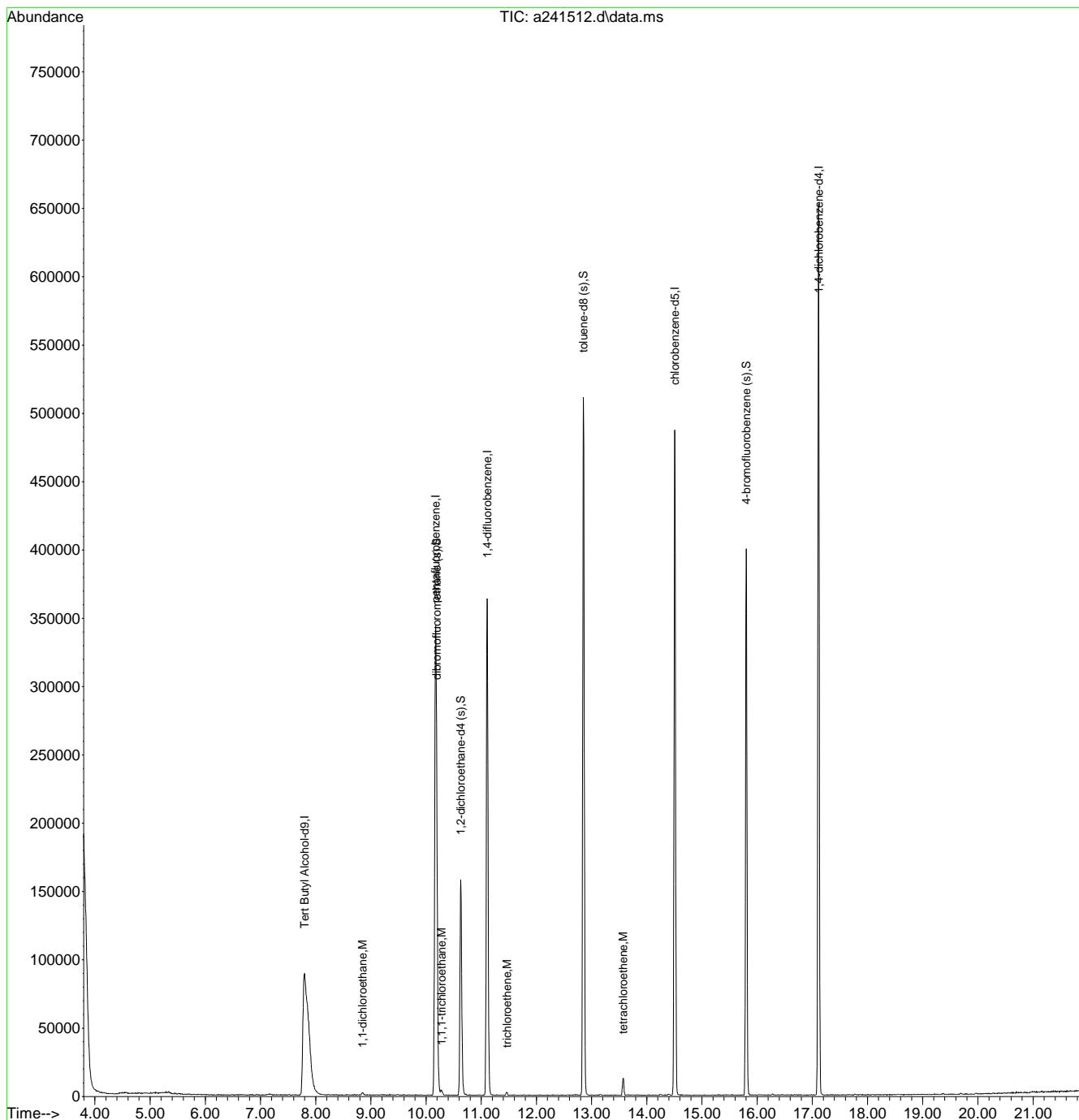
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.800	65	391664	500.00	ug/L	-0.01
5) pentafluorobenzene	10.169	168	242345	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	353189	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	316570	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	195549	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	120968	50.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	100.16%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	121380	48.24	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	96.48%	
77) toluene-d8 (s)	12.852	98	382588	45.23	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	90.46%	
101) 4-bromofluorobenzene (s)	15.802	95	145744	45.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.52%	
<hr/>						
Target Compounds						
33) 1,1-dichloroethane	8.846	63	2701	0.61	ug/L	79
49) 1,1,1-trichloroethane	10.284	97	3792	1.04	ug/L	85
64) trichloroethene	11.466	95	949	0.47	ug/L	86
83) tetrachloroethene	13.574	166	4581	2.18	ug/L	84

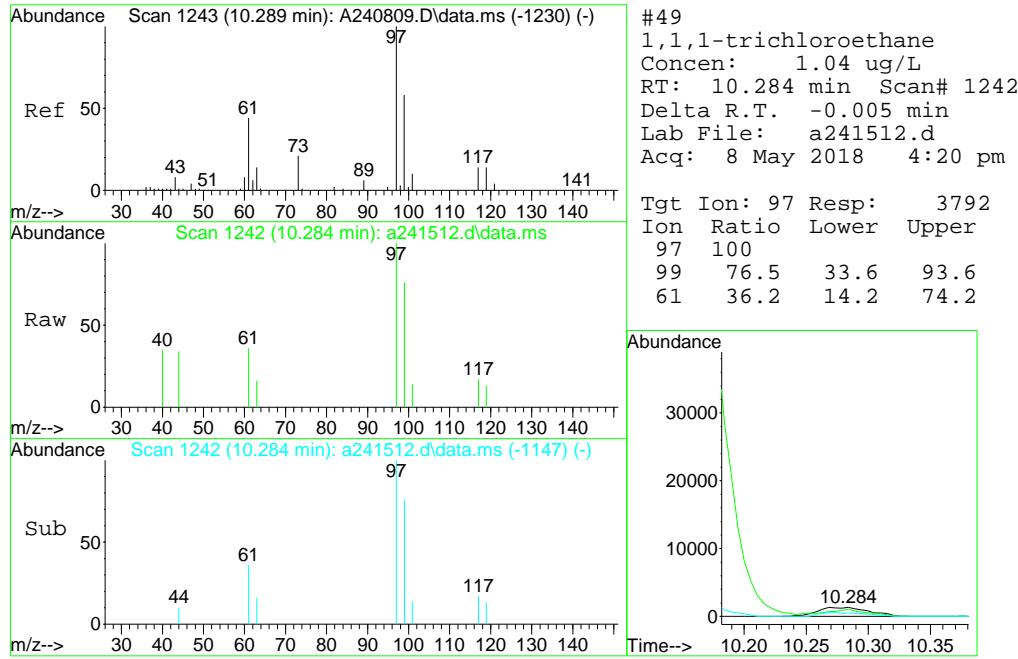
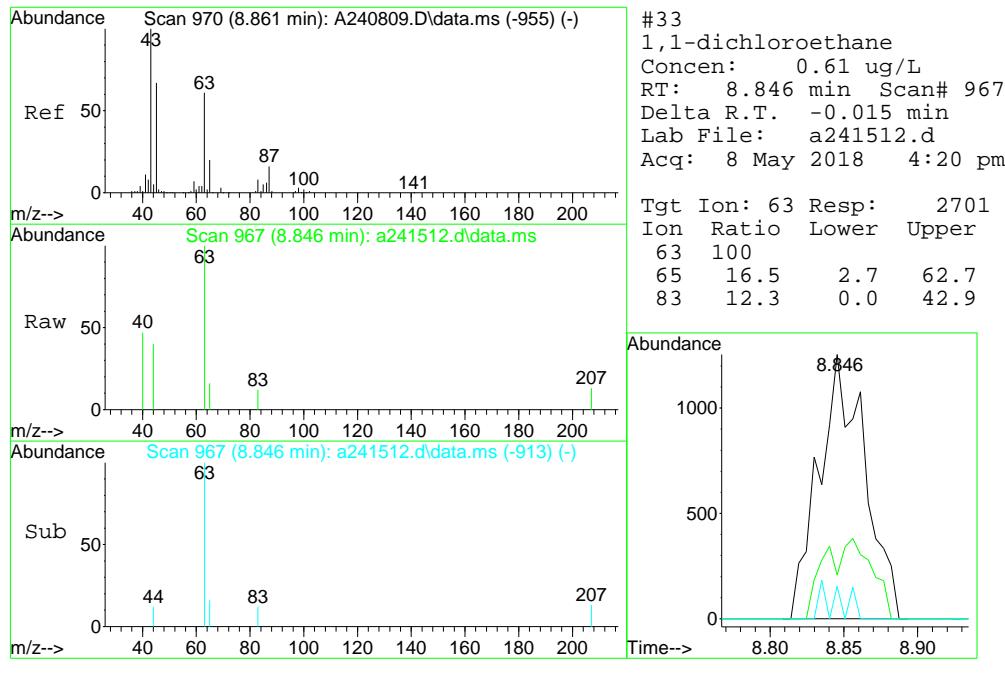
(#) = qualifier out of range (m) = manual integration (+) = signals summed

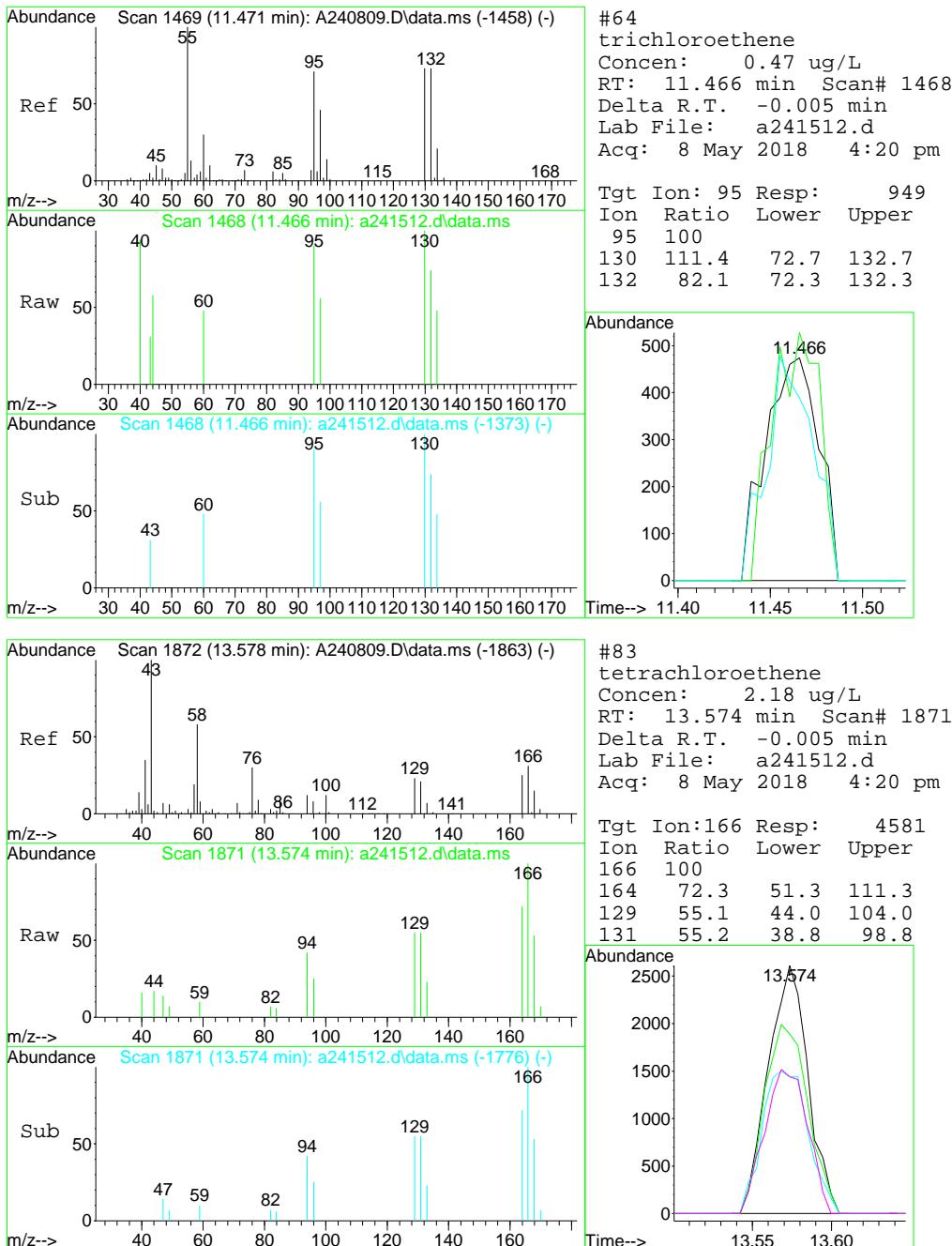
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241512.d
 Acq On : 8 May 2018 4:20 pm
 Operator : oyinadei
 Sample : JC65633-11 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 19 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:46:17 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration







Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241513.d
 Acq On : 8 May 2018 4:49 pm
 Operator : oyinadei
 Sample : JC65633-12 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:46:56 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	393784	500.00	ug/L	-0.02
5) pentafluorobenzene	10.168	168	247986	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	354487	50.00	ug/L	0.00
76) chlorobenzene-d5	14.509	117	323543	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	200843	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	122557	49.58	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.16%
55) 1,2-dichloroethane-d4 (s)	10.628	65	123748	49.01	ug/L	-0.02
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.02%
77) toluene-d8 (s)	12.851	98	389790	45.09	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	90.18%
101) 4-bromofluorobenzene (s)	15.801	95	151770	46.39	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.78%

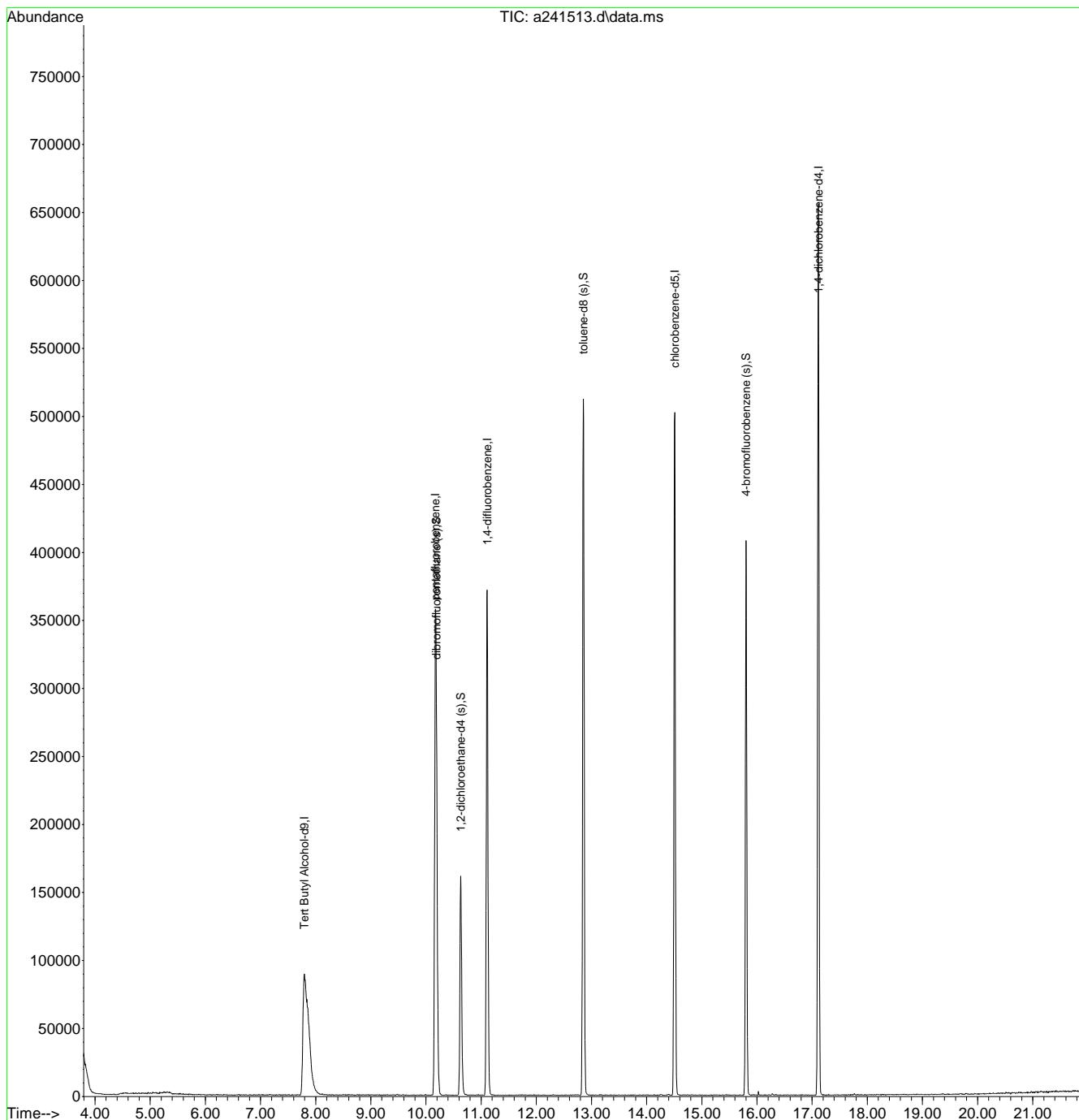
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241513.d
 Acq On : 8 May 2018 4:49 pm
 Operator : oyinadei
 Sample : JC65633-12 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 20 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:46:56 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241498.d
 Acq On : 8 May 2018 9:08 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:32:44 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	413671	500.00	ug/L	-0.02
5) pentafluorobenzene	10.168	168	260614	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.104	114	373923	50.00	ug/L	-0.01
76) chlorobenzene-d5	14.504	117	337927	50.00	ug/L	-0.01
100) 1,4-dichlorobenzene-d4	17.114	152	207897	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	127566	49.11	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.22%
55) 1,2-dichloroethane-d4 (s)	10.628	65	125939	47.28	ug/L	-0.02
Spiked Amount	50.000	Range	81 - 124	Recovery	=	94.56%
77) toluene-d8 (s)	12.851	98	405748	44.94	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	89.88%
101) 4-bromofluorobenzene (s)	15.801	95	156894	46.33	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.66%

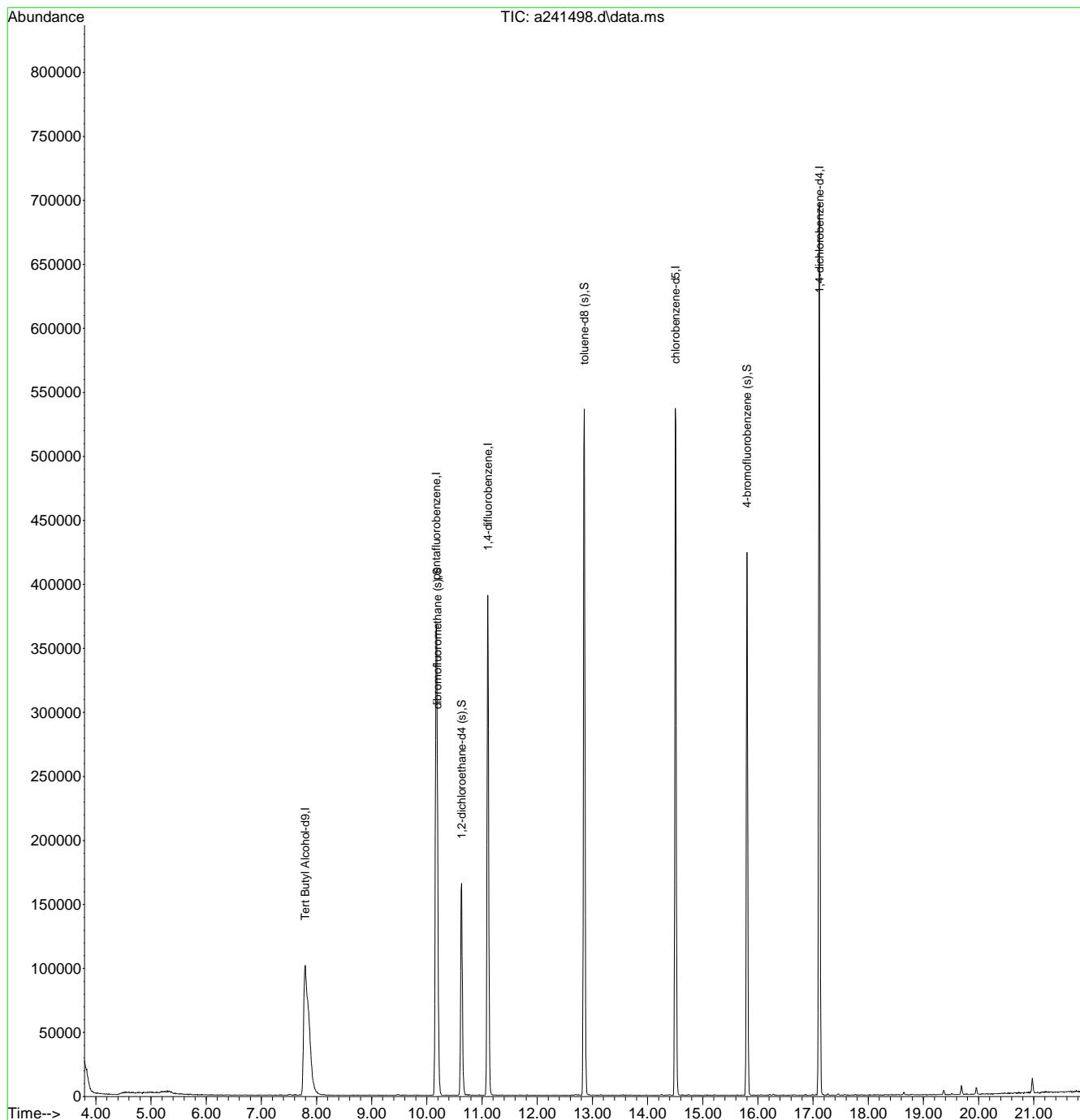
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241498.d
 Acq On : 8 May 2018 9:08 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:32:44 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241548.d
 Acq On : 10 May 2018 10:54 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:03:28 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.799	65	265895	500.00	ug/L	-0.01
5) pentafluorobenzene	10.168	168	171793	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	243770	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	214995	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	132016	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.189	113	86128	50.30	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.60%
55) 1,2-dichloroethane-d4 (s)	10.629	65	85927	49.48	ug/L	-0.02
Spiked Amount	50.000	Range	81 - 124	Recovery	=	98.96%
77) toluene-d8 (s)	12.852	98	264986	46.13	ug/L	-0.01
Spiked Amount	50.000	Range	80 - 120	Recovery	=	92.26%
101) 4-bromofluorobenzene (s)	15.801	95	100377	46.68	ug/L	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	93.36%

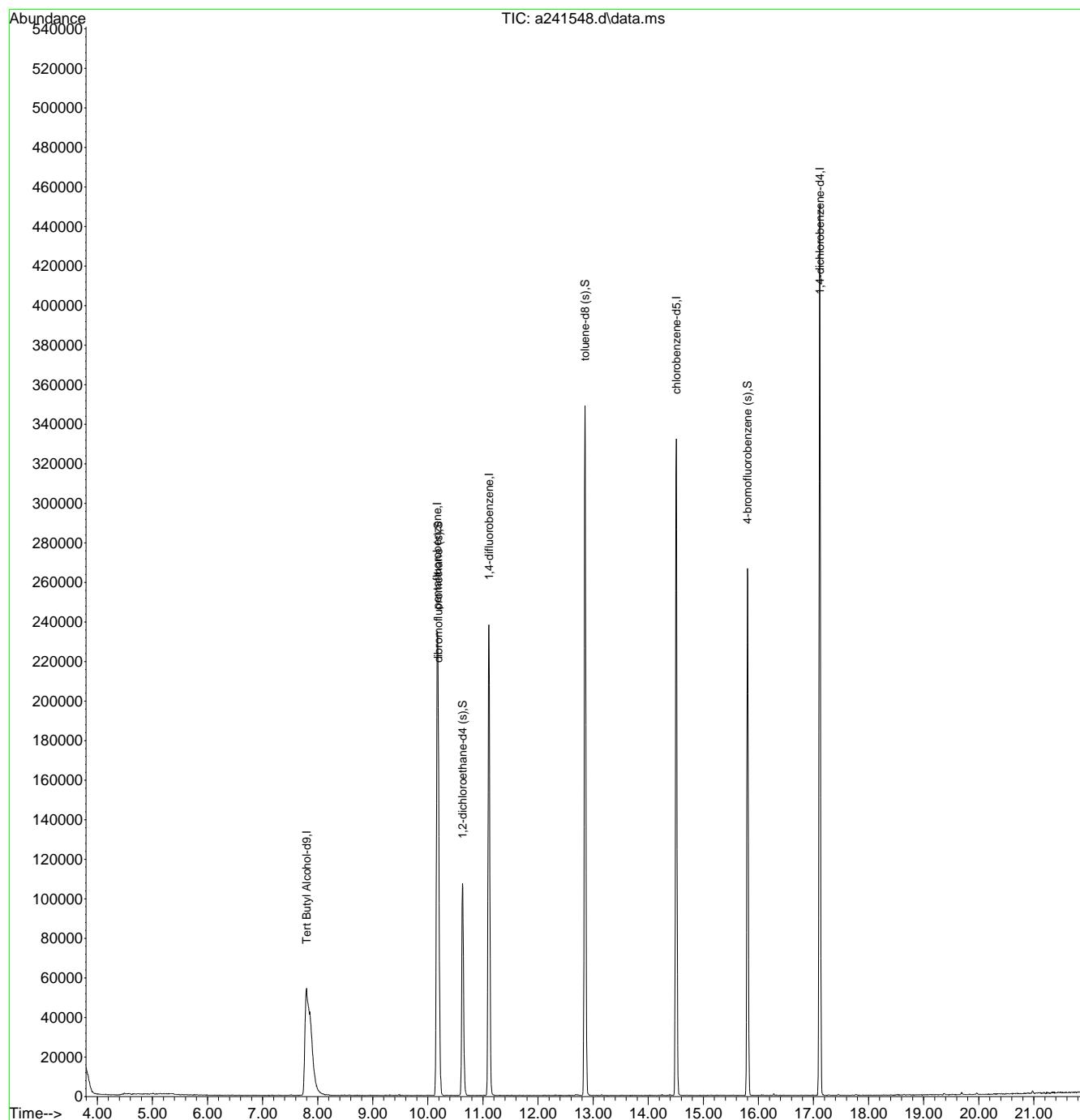
Target Compounds	Qvalue
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241548.d
 Acq On : 10 May 2018 10:54 am
 Operator : oyinadei
 Sample : mb Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:03:28 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.794	65	431368	500.00	ug/L	-0.02
5) pentafluorobenzene	10.169	168	268335	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.105	114	394996	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	359810	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.109	152	205198	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	131729	49.25	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	98.50%	
55) 1,2-dichloroethane-d4 (s)	10.629	65	132774	47.19	ug/L	-0.02
Spiked Amount 50.000	Range 81 - 124		Recovery	=	94.38%	
77) toluene-d8 (s)	12.852	98	438290	45.59	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	91.18%	
101) 4-bromofluorobenzene (s)	15.802	95	159861	47.83	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	95.66%	
Target Compounds						
3) tertiary butyl alcohol	7.920	59	207829	271.92	ug/L	95
4) 1,4-dioxane	11.848	88	65847	1369.77	ug/L	92
6) chlorodifluoromethane	4.196	51	178701	43.22	ug/L	96
7) dichlorodifluoromethane	4.180	85	241140	53.26	ug/L	95
10) chloromethane	4.541	50	285246	55.23	ug/L	99
11) vinyl chloride	4.829	62	322915	60.72	ug/L	99
13) bromomethane	5.514	94	202594	67.67	ug/L	97
14) chloroethane	5.697	64	150743	63.70	ug/L	97
15) vinyl bromide	6.089	106	180196	66.31	ug/L	99
16) trichlorofluoromethane	6.246	101	248479	58.71	ug/L	98
17) ethyl ether	6.659	74	74917	54.20	ug/L	88
18) acrolein	6.905	56	36604	45.58	ug/L	89
19) freon 113	7.114	151	132469	63.00	ug/L	99
20) 1,1-dichloroethene	7.093	96	130469	52.42	ug/L	98
21) acetone	7.130	58	72372	180.74	ug/L	91
22) acetonitrile	7.580	41	303076	472.27	ug/L	96
23) iodomethane	7.381	142	233494	46.50	ug/L	98
24) carbon disulfide	7.517	76	448596	46.68	ug/L	99
25) methylene chloride	7.847	84	153684	53.52	ug/L	90
26) methyl acetate	7.643	43	125938	42.37	ug/L	95
27) methyl tert butyl ether	8.239	73	517752	60.17	ug/L	97
28) trans-1,2-dichloroethene	8.255	96	126348	50.68	ug/L	97
29) hexane	8.610	57	145431	40.63	ug/L	96
30) di-isopropyl ether	8.872	45	435058	45.58	ug/L	76
31) ethyl tert-butyl ether	9.358	59	471479	54.58	ug/L	97
32) 2-butanone	9.573	72	86336	201.56	ug/L #	75
33) 1,1-dichloroethane	8.846	63	227181	46.22	ug/L	97
34) chloroprene	8.971	53	166604	44.20	ug/L	95
35) acrylonitrile	8.176	53	67982	46.28	ug/L	95
36) vinyl acetate	8.840	86	25024	50.39	ug/L #	51
37) ethyl acetate	9.609	45	24315	44.92	ug/L #	22
38) 2,2-dichloropropane	9.635	77	240877	57.19	ug/L	94
39) cis-1,2-dichloroethene	9.609	96	143525	50.10	ug/L	95
40) methyl acrylate	9.682	85	23430	47.01	ug/L #	66
41) propionitrile	9.661	54	307839	335.88	ug/L	75
42) bromochloromethane	9.923	128	72897	46.57	ug/L	92
43) tetrahydrofuran	9.975	42	64376	39.96	ug/L	94
44) chloroform	9.986	83	212772	47.75	ug/L	98
45) tert-butyl formate	10.054	59	153815	56.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.865	67	62497	45.88	ug/L	89
48) cyclohexane	10.373	84	181242	43.88	ug/L	87
49) 1,1,1-trichloroethane	10.279	97	227928	56.63	ug/L	97
50) iso-butyl alcohol	10.430	43	130348	518.37	ug/L	99
51) 1,1-dichloropropene	10.456	75	152539	45.47	ug/L	97
52) carbon tetrachloride	10.493	117	195994	56.76	ug/L	99
53) tert-amyl alcohol	10.582	73	102364	280.78	ug/L	97
56) benzene	10.728	78	466622	47.09	ug/L	98
57) iso-octane	10.775	57	486511	49.91	ug/L	99
58) tert-amyl methyl ether	10.786	73	473054	54.85	ug/L	99
59) heptane	10.943	71	83512	44.80	ug/L	97
60) isopropyl acetate	10.655	87	33003	53.83	ug/L #	75
61) 1,2-dichloroethane	10.723	62	148228	47.22	ug/L	99
62) n-butyl alcohol	11.204	56	409648	2674.50	ug/L	95
63) ethyl acrylate	11.466	55	161082	47.35	ug/L	97
64) trichloroethylene	11.461	95	111027	49.61	ug/L	99
65) 2-nitropropane	12.256	41	47527	39.55	ug/L #	59
66) methylcyclohexane	11.727	83	254319	50.80	ug/L	94
67) 2-chloroethyl vinyl ether	12.292	63	372617	253.54	ug/L	98
68) methyl methacrylate	11.743	100	36552	53.98	ug/L #	63
69) 1,2-dichloropropane	11.733	63	119518	45.25	ug/L	95
70) dibromomethane	11.884	93	78364	52.02	ug/L	98
71) bromodichloromethane	12.020	83	156877	51.14	ug/L	98
72) epichlorohydrin	12.407	57	90977	242.95	ug/L	99
73) cis-1,3-dichloropropene	12.517	75	187370	50.74	ug/L	95
74) 4-methyl-2-pentanone	12.637	58	290984	204.99	ug/L	91
75) 3-methyl-1-butanol	12.637	55	275579	1076.51	ug/L	93
78) toluene	12.930	92	266425	43.81	ug/L	98
79) trans-1,3-dichloropropene	13.119	75	165155	48.92	ug/L	97
80) ethyl methacrylate	13.140	69	163521	47.94	ug/L	92
81) 1,1,2-trichloroethane	13.354	83	88519	48.48	ug/L	97
82) 2-hexanone	13.563	58	261366	199.79	ug/L	92
83) tetrachloroethylene	13.574	166	116893	48.83	ug/L	95
84) 1,3-dichloropropane	13.558	76	169190	47.75	ug/L	99
85) butyl acetate	13.652	56	93979	50.53	ug/L	88
87) dibromochloromethane	13.840	129	122802	50.38	ug/L	100
88) 1,2-dibromoethane	14.013	107	118945	55.17	ug/L	98
89) n-butyl ether	14.478	57	493422	44.33	ug/L	97
90) chlorobenzene	14.541	112	297835	50.50	ug/L	98
91) 1,1,1,2-tetrachloroethane	14.609	131	144351	50.73	ug/L	98
92) ethylbenzene	14.614	91	511952	48.01	ug/L	100
93) m,p-xylene	14.735	106	406875	100.73	ug/L	98
94) o-xylene	15.200	106	222533	50.69	ug/L	99
95) styrene	15.205	104	332642	51.03	ug/L	99
96) butyl acrylate	15.007	55	244053	47.29	ug/L	96
97) bromoform	15.477	173	92970	59.10	ug/L	98
98) isopropylbenzene	15.592	105	596188	49.84	ug/L	99
99) cis-1,4-dichloro-2-butene	15.645	75	63057	52.83	ug/L	98
102) bromobenzene	16.021	156	137566	50.45	ug/L	96
103) 1,1,2,2-tetrachloroethane	15.896	83	191067	48.35	ug/L	98
104) trans-1,4-dichloro-2-b...	15.953	53	42047	55.00	ug/L	95
105) 1,2,3-trichloropropane	15.985	110	49802	52.97	ug/L	96
106) n-propylbenzene	16.053	91	640879	45.83	ug/L	100
107) 2-chlorotoluene	16.204	126	143414	50.20	ug/L	95
108) 4-chlorotoluene	16.314	91	360088	48.81	ug/L	97
110) 1,3,5-trimethylbenzene	16.220	105	513769	47.25	ug/L	99
111) tert-butylbenzene	16.618	134	108619	48.98	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241496.d
 Acq On : 8 May 2018 7:50 am
 Operator : oyinadei
 Sample : bs Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:31:39 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
112) 1,2,4-trimethylbenzene	16.659	105	503885	47.51	ug/L	99
113) sec-butylbenzene	16.858	105	682332	48.15	ug/L	99
114) 1,3-dichlorobenzene	17.046	146	264824	50.79	ug/L	98
115) p-isopropyltoluene	16.994	119	564796	48.12	ug/L	99
116) 1,4-dichlorobenzene	17.141	146	265582	50.12	ug/L	100
117) 1,2-dichlorobenzene	17.575	146	281797	49.38	ug/L	99
119) n-butylbenzene	17.454	92	284415	46.12	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.417	157	53789	50.44	ug/L	94
122) 1,3,5-trichlorobenzene	18.642	180	257254	47.64	ug/L	99
123) 2-ethylhexyl acrylate	19.353	70	29648	7.25	ug/L	96
124) 1,2,4-trichlorobenzene	19.363	180	222563	47.53	ug/L	96
125) hexachlorobutadiene	19.515	225	100661	51.33	ug/L	98
126) naphthalene	19.688	128	587679	49.49	ug/L	99
127) 1,2,3-trichlorobenzene	19.960	180	211756	50.04	ug/L	97
128) hexachloroethane	17.883	201	101658	49.59	ug/L	99
129) 2-methylnaphthalene	20.974	142	122823	26.38	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.3.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\

Data File : a241496.d

Acq On : 8 May 2018 7:50 am

Operator : oyinadei

Sample : bs

Misc : MS26069,VA9204,5,,,.1

Inst : MSA

ALS Vial : 3 Sample Multipl

Quant Method : C:\MSDCHEM\1\METHODS\

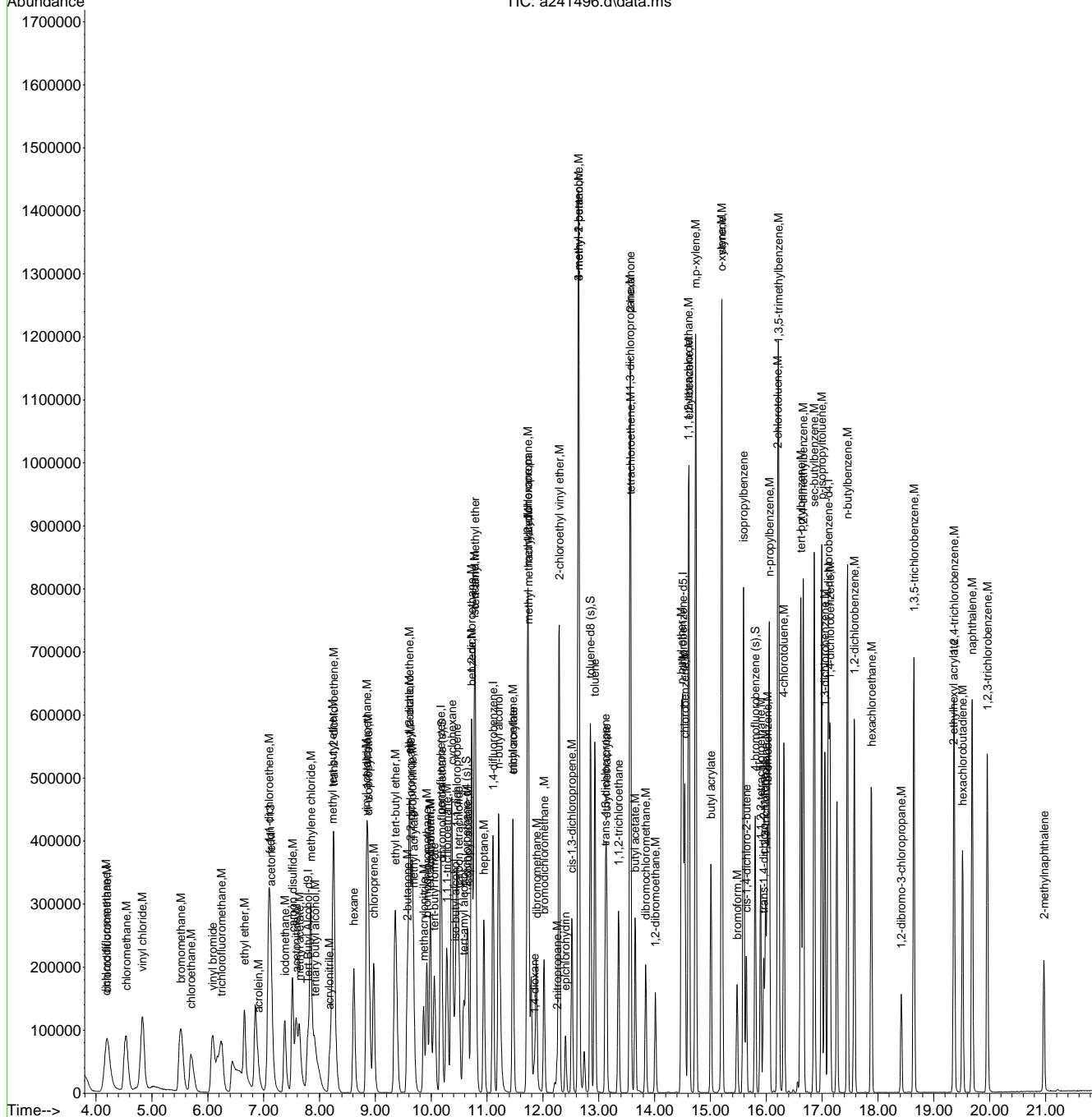
Quant Results File: MA9165.RES

Quant Time: May 09 03:31:39 2018

Quant Title : SW 846 8260C DB624 60m

Last Update : Tue Apr 17 15:31:13

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.812	65	252948	500.00	ug/L	0.00
5) pentafluorobenzene	10.171	168	182681	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.112	114	274352	50.00	ug/L	0.00
76) chlorobenzene-d5	14.512	117	250052	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.116	152	143599	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.192	113	91040	50.00	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.00%		
55) 1,2-dichloroethane-d4 (s)	10.631	65	92269	47.21	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	= 94.42%		
77) toluene-d8 (s)	12.854	98	313910	46.98	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 93.96%		
101) 4-bromofluorobenzene (s)	15.804	95	112364	48.04	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 96.08%		
Target Compounds						
3) tertiary butyl alcohol	7.932	59	112380	250.75	ug/L	98
4) 1,4-dioxane	11.850	88	34265	1215.57	ug/L	94
6) chlorodifluoromethane	4.193	51	100336	35.64	ug/L	93
7) dichlorodifluoromethane	4.193	85	198978	64.55	ug/L	97
10) chloromethane	4.538	50	182515	51.91	ug/L	99
11) vinyl chloride	4.836	62	207260	57.24	ug/L	99
13) bromomethane	5.521	94	113983	55.92	ug/L	99
14) chloroethane	5.715	64	93080	57.70	ug/L	94
15) vinyl bromide	6.091	106	170125	91.95	ug/L	98
16) trichlorofluoromethane	6.243	101	169278	58.75	ug/L	97
17) ethyl ether	6.661	74	41891	44.52	ug/L	86
18) acrolein	6.902	56	16968	31.04	ug/L	96
19) freon 113	7.111	151	88242	61.64	ug/L	99
20) 1,1-dichloroethene	7.101	96	81467	48.08	ug/L	94
21) acetone	7.137	58	41276	151.41	ug/L	95
22) acetonitrile	7.597	41	171596	392.77	ug/L	97
23) iodomethane	7.383	142	132100	38.64	ug/L	99
24) carbon disulfide	7.519	76	270690	41.37	ug/L	97
25) methylene chloride	7.843	84	87548	44.79	ug/L	92
26) methyl acetate	7.650	43	71093	35.13	ug/L	95
27) methyl tert butyl ether	8.241	73	285215	48.69	ug/L	97
28) trans-1,2-dichloroethene	8.256	96	79960	47.11	ug/L	92
29) hexane	8.617	57	105959	43.48	ug/L	96
30) di-isopropyl ether	8.874	45	255224	39.28	ug/L	80
31) ethyl tert-butyl ether	9.360	59	267535	45.50	ug/L	97
32) 2-butanone	9.580	72	49923	171.20	ug/L #	71
33) 1,1-dichloroethane	8.847	63	140804	42.08	ug/L	100
34) chloroprene	8.973	53	111064	43.28	ug/L	95
35) acrylonitrile	8.183	53	38920	38.91	ug/L	97
36) vinyl acetate	8.847	86	14508	42.92	ug/L #	60
37) ethyl acetate	9.611	45	13510	36.66	ug/L #	78
38) 2,2-dichloropropane	9.642	77	142886	49.83	ug/L	97
39) cis-1,2-dichloroethene	9.611	96	89496	45.89	ug/L	97
40) methyl acrylate	9.690	85	13794	40.65	ug/L #	86
41) propionitrile	9.669	54	181731	291.26	ug/L	90
42) bromochloromethane	9.930	128	44740	41.99	ug/L #	85
43) tetrahydrofuran	9.982	42	35001	31.91	ug/L	91
44) chloroform	9.988	83	133410	43.98	ug/L	96
45) tert-butyl formate	10.061	59	44568	23.88	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms
 Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.867	67	37692	40.64	ug/L	90
48) cyclohexane	10.375	84	156850	55.78	ug/L	93
49) 1,1,1-trichloroethane	10.286	97	142562	52.03	ug/L	97
50) iso-butyl alcohol	10.443	43	70803	413.59	ug/L	97
51) 1,1-dichloropropene	10.464	75	107430	47.04	ug/L	97
52) carbon tetrachloride	10.495	117	123733	52.63	ug/L	99
53) tert-amyl alcohol	10.589	73	56288	226.78	ug/L	97
56) benzene	10.730	78	312878	45.46	ug/L	99
57) iso-octane	10.783	57	343413	50.72	ug/L	97
58) tert-amyl methyl ether	10.788	73	265278	44.29	ug/L	98
59) heptane	10.950	71	65647	50.70	ug/L	93
60) isopropyl acetate	10.662	87	20209	47.46	ug/L	# 76
61) 1,2-dichloroethane	10.725	62	91974	42.19	ug/L	97
62) n-butyl alcohol	11.212	56	221157	2078.82	ug/L	93
63) ethyl acrylate	11.473	55	90235	38.19	ug/L	96
64) trichloroethylene	11.463	95	75376	48.49	ug/L	98
65) 2-nitropropane	12.258	41	19152	22.95	ug/L	# 53
66) methylcyclohexane	11.729	83	180027	51.77	ug/L	94
68) methyl methacrylate	11.750	100	21016	44.69	ug/L	# 54
69) 1,2-dichloropropane	11.740	63	79741	43.46	ug/L	91
70) dibromomethane	11.886	93	48988	46.82	ug/L	98
71) bromodichloromethane	12.027	83	100428	47.13	ug/L	99
72) epichlorohydrin	12.409	57	43968	169.04	ug/L	100
73) cis-1,3-dichloropropene	12.524	75	116314	45.35	ug/L	93
74) 4-methyl-2-pentanone	12.645	58	178695	181.24	ug/L	91
75) 3-methyl-1-butanol	12.639	55	158572	891.83	ug/L	95
78) toluene	12.937	92	184014	43.54	ug/L	98
79) trans-1,3-dichloropropene	13.126	75	97497	41.56	ug/L	96
80) ethyl methacrylate	13.141	69	101619	42.87	ug/L	92
81) 1,1,2-trichloroethane	13.356	83	55232	43.52	ug/L	99
82) 2-hexanone	13.565	58	151387	166.52	ug/L	94
83) tetrachloroethene	13.570	166	83566	50.23	ug/L	95
84) 1,3-dichloropropane	13.560	76	103467	42.02	ug/L	99
85) butyl acetate	13.654	56	56727	43.31	ug/L	89
87) dibromochloromethane	13.842	129	75791	44.74	ug/L	97
88) 1,2-dibromoethane	14.015	107	73244	48.89	ug/L	97
89) n-butyl ether	14.486	57	350966	45.37	ug/L	97
90) chlorobenzene	14.543	112	199505	48.67	ug/L	98
91) 1,1,1,2-tetrachloroethane	14.611	131	95895	48.50	ug/L	98
92) ethylbenzene	14.616	91	362301	48.89	ug/L	99
93) m,p-xylene	14.737	106	280782	100.02	ug/L	99
94) o-xylene	15.207	106	157685	51.69	ug/L	99
95) styrene	15.207	104	220653	48.71	ug/L	98
96) butyl acrylate	15.009	55	149595	41.71	ug/L	99
97) bromoform	15.479	173	55259	50.54	ug/L	99
98) isopropylbenzene	15.594	105	434678	52.28	ug/L	99
99) cis-1,4-dichloro-2-butene	15.641	75	31424	37.89	ug/L	98
102) bromobenzene	16.023	156	88866	46.57	ug/L	98
103) 1,1,2,2-tetrachloroethane	15.898	83	120970	43.74	ug/L	99
104) trans-1,4-dichloro-2-b...	15.950	53	21630	40.43	ug/L	94
105) 1,2,3-trichloropropane	15.992	110	31036	47.17	ug/L	97
106) n-propylbenzene	16.055	91	464559	47.47	ug/L	99
107) 2-chlorotoluene	16.206	126	99907	49.97	ug/L	95
108) 4-chlorotoluene	16.321	91	240487	46.58	ug/L	98
110) 1,3,5-trimethylbenzene	16.222	105	363077	47.72	ug/L	99
111) tert-butylbenzene	16.619	134	75815	48.86	ug/L	92
112) 1,2,4-trimethylbenzene	16.667	105	350929	47.28	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241549.d
 Acq On : 10 May 2018 11:30 am
 Operator : oyinadei
 Sample : jc65633-9ms Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:06:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

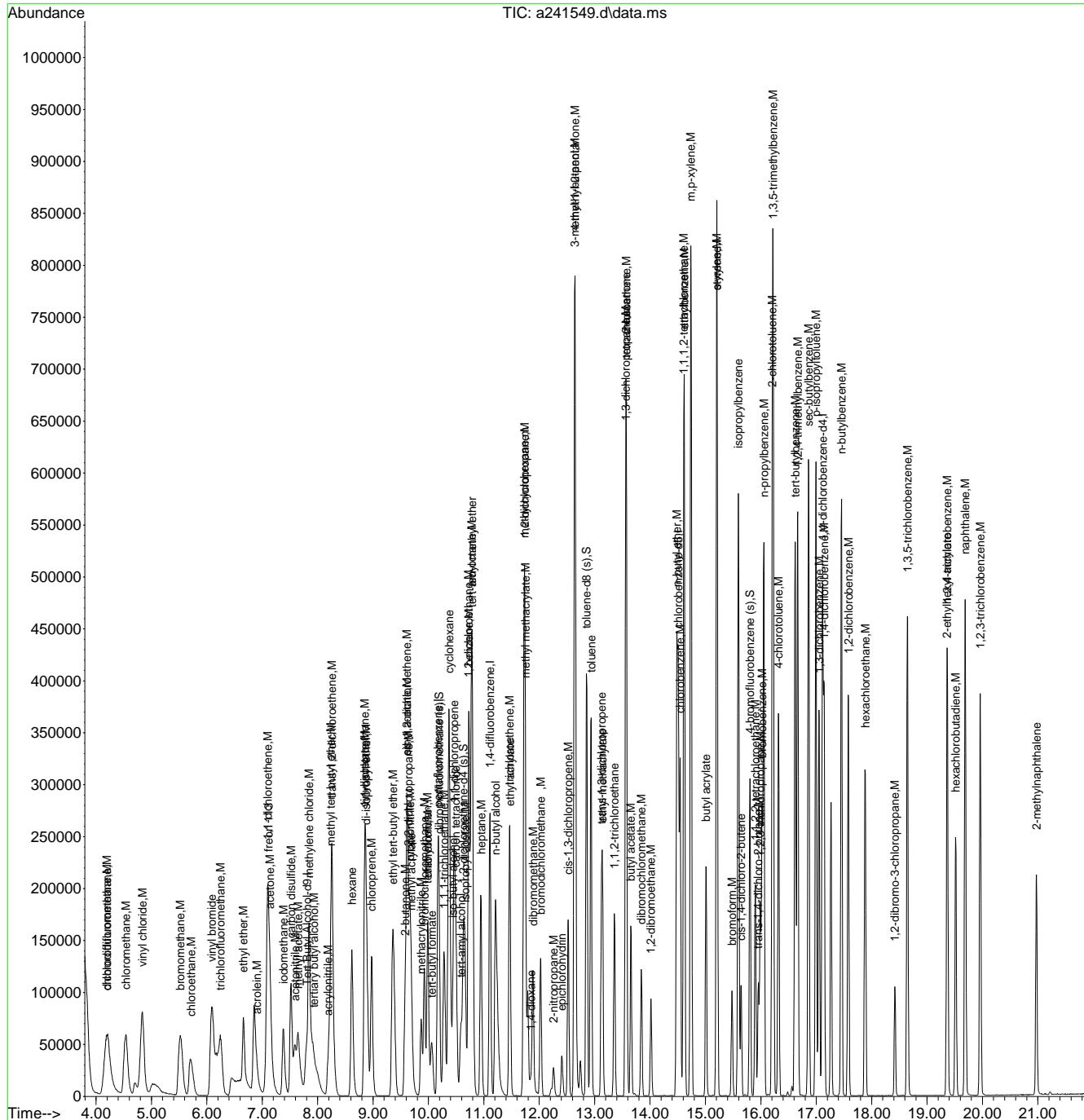
Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
113) sec-butylbenzene	16.865	105	489131	49.32	ug/L	99
114) 1,3-dichlorobenzene	17.054	146	175604	48.13	ug/L	98
115) p-isopropyltoluene	16.996	119	405572	49.38	ug/L	99
116) 1,4-dichlorobenzene	17.142	146	174360	47.02	ug/L	98
117) 1,2-dichlorobenzene	17.582	146	184993	46.33	ug/L	98
119) n-butylbenzene	17.456	92	200804	46.53	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.419	157	36540	48.96	ug/L	96
122) 1,3,5-trichlorobenzene	18.649	180	170855	45.21	ug/L	97
123) 2-ethylhexyl acrylate	19.360	70	17090	5.97	ug/L	96
124) 1,2,4-trichlorobenzene	19.365	180	155824	47.56	ug/L	98
125) hexachlorobutadiene	19.517	225	65537	47.75	ug/L	97
126) naphthalene	19.690	128	435981	52.46	ug/L	99
127) 1,2,3-trichlorobenzene	19.962	180	152466	51.48	ug/L	94
128) hexachloroethane	17.885	201	68507	47.75	ug/L	98
129) 2-methylnaphthalene	20.976	142	124815	38.31	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
Data File : a241549.d
Acq On : 10 May 2018 11:30 am
Operator : oyinadei
Sample : jc65633-9ms Inst : MSA
Misc : MS26140,VA9204,5,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
Quant Results File: MA9165.RES
Quant Time: May 10 23:06:43 2018
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 17 15:31:13 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.799	65	247323	500.00	ug/L	-0.01
5) pentafluorobenzene	10.168	168	183052	50.00	ug/L	-0.01
54) 1,4-difluorobenzene	11.110	114	275053	50.00	ug/L	0.00
76) chlorobenzene-d5	14.509	117	245859	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.114	152	139552	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.195	113	92869	50.90	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.80%	
55) 1,2-dichloroethane-d4 (s)	10.634	65	94425	48.19	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	96.38%	
77) toluene-d8 (s)	12.857	98	308309	46.93	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	93.86%	
101) 4-bromofluorobenzene (s)	15.801	95	109851	48.33	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	96.66%	
<hr/>						
Target Compounds						
3) tertiary butyl alcohol	7.925	59	114546	261.39	ug/L	94
4) 1,4-dioxane	11.852	88	31896	1157.26	ug/L	93
6) chlorodifluoromethane	4.185	51	100943	35.78	ug/L	87
7) dichlorodifluoromethane	4.175	85	200066	64.78	ug/L	98
10) chloromethane	4.530	50	177322	50.33	ug/L	99
11) vinyl chloride	4.828	62	202661	55.86	ug/L	96
13) bromomethane	5.514	94	110935	54.32	ug/L	98
14) chloroethane	5.697	64	88889	54.95	ug/L	98
15) vinyl bromide	6.089	106	167835	90.53	ug/L	99
16) trichlorofluoromethane	6.246	101	168484	58.35	ug/L	99
17) ethyl ether	6.654	74	42637	45.22	ug/L	86
18) acrolein	6.894	56	17087	31.19	ug/L	96
19) freon 113	7.104	151	89488	62.38	ug/L	98
20) 1,1-dichloroethene	7.098	96	83139	48.96	ug/L	92
21) acetone	7.135	58	41633	152.41	ug/L	92
22) acetonitrile	7.590	41	169177	386.44	ug/L	96
23) iodomethane	7.381	142	137593	40.17	ug/L	97
24) carbon disulfide	7.517	76	262977	40.11	ug/L	98
25) methylene chloride	7.841	84	90319	46.11	ug/L	90
26) methyl acetate	7.647	43	72191	35.60	ug/L	94
27) methyl tert butyl ether	8.238	73	291298	49.63	ug/L	97
28) trans-1,2-dichloroethene	8.259	96	80787	47.51	ug/L	94
29) hexane	8.620	57	108028	44.24	ug/L	95
30) di-isopropyl ether	8.871	45	256813	39.44	ug/L	85
31) ethyl tert-butyl ether	9.358	59	272785	46.29	ug/L	97
32) 2-butanone	9.577	72	50802	173.86	ug/L #	74
33) 1,1-dichloroethane	8.850	63	146288	43.63	ug/L	98
34) chloroprene	8.976	53	112589	43.78	ug/L	95
35) acrylonitrile	8.186	53	39113	39.03	ug/L	95
36) vinyl acetate	8.845	86	14764	43.58	ug/L #	54
37) ethyl acetate	9.614	45	13613	36.87	ug/L #	56
38) 2,2-dichloropropane	9.635	77	144085	50.14	ug/L	96
39) cis-1,2-dichloroethene	9.609	96	92078	47.12	ug/L	92
40) methyl acrylate	9.692	85	14179	41.70	ug/L #	73
41) propionitrile	9.666	54	184643	295.33	ug/L	90
42) bromochloromethane	9.928	128	45273	42.40	ug/L	86
43) tetrahydrofuran	9.985	42	35370	32.18	ug/L	91
44) chloroform	9.985	83	137016	45.08	ug/L	96
45) tert-butyl formate	10.064	59	27867	14.90	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.870	67	38066	40.96	ug/L	89
48) cyclohexane	10.372	84	156302	55.47	ug/L	92
49) 1,1,1-trichloroethane	10.278	97	145451	52.98	ug/L	97
50) iso-butyl alcohol	10.435	43	68041	396.65	ug/L	99
51) 1,1-dichloropropene	10.461	75	109448	47.83	ug/L	97
52) carbon tetrachloride	10.493	117	124619	52.90	ug/L	99
53) tert-amyl alcohol	10.597	73	56947	228.97	ug/L	96
56) benzene	10.733	78	324076	46.97	ug/L	99
57) iso-octane	10.780	57	354584	52.24	ug/L	98
58) tert-amyl methyl ether	10.791	73	272438	45.36	ug/L	99
59) heptane	10.948	71	66799	51.46	ug/L	94
60) isopropyl acetate	10.665	87	20561	48.16	ug/L	# 75
61) 1,2-dichloroethane	10.723	62	95531	43.71	ug/L	97
62) n-butyl alcohol	11.209	56	215350	2019.08	ug/L	91
63) ethyl acrylate	11.471	55	92993	39.26	ug/L	95
64) trichloroethylene	11.465	95	77136	49.50	ug/L	99
65) 2-nitropropane	12.260	41	19964	23.86	ug/L	# 52
66) methylcyclohexane	11.727	83	180152	51.67	ug/L	94
68) methyl methacrylate	11.748	100	21876	46.40	ug/L	# 59
69) 1,2-dichloropropane	11.737	63	79959	43.47	ug/L	96
70) dibromomethane	11.884	93	49650	47.33	ug/L	98
71) bromodichloromethane	12.025	83	102469	47.97	ug/L	97
72) epichlorohydrin	12.407	57	40152	153.98	ug/L	99
73) cis-1,3-dichloropropene	12.522	75	117292	45.61	ug/L	95
74) 4-methyl-2-pentanone	12.642	58	184526	186.68	ug/L	89
75) 3-methyl-1-butanol	12.642	55	160789	902.00	ug/L	94
78) toluene	12.935	92	185349	44.61	ug/L	100
79) trans-1,3-dichloropropene	13.123	75	98356	42.64	ug/L	96
80) ethyl methacrylate	13.139	69	102878	44.14	ug/L	91
81) 1,1,2-trichloroethane	13.354	83	54775	43.90	ug/L	97
82) 2-hexanone	13.568	58	152713	170.84	ug/L	90
83) tetrachloroethene	13.573	166	83780	51.22	ug/L	97
84) 1,3-dichloropropane	13.557	76	103930	42.92	ug/L	98
85) butyl acetate	13.657	56	55342	42.94	ug/L	92
87) dibromochloromethane	13.845	129	74968	45.01	ug/L	99
88) 1,2-dibromoethane	14.018	107	74271	50.42	ug/L	96
89) n-butyl ether	14.483	57	344175	45.25	ug/L	97
90) chlorobenzene	14.541	112	197749	49.07	ug/L	99
91) 1,1,1,2-tetrachloroethane	14.609	131	97141	49.96	ug/L	97
92) ethylbenzene	14.619	91	360699	49.50	ug/L	100
93) m,p-xylene	14.740	106	280600	101.66	ug/L	100
94) o-xylene	15.205	106	155842	51.95	ug/L	100
95) styrene	15.210	104	221167	49.65	ug/L	99
96) butyl acrylate	15.011	55	151184	42.88	ug/L	97
97) bromoform	15.477	173	55411	51.55	ug/L	99
98) isopropylbenzene	15.597	105	432697	52.93	ug/L	99
99) cis-1,4-dichloro-2-butene	15.644	75	30097	36.90	ug/L	96
102) bromobenzene	16.021	156	88834	47.91	ug/L	95
103) 1,1,2,2-tetrachloroethane	15.901	83	122329	45.52	ug/L	99
104) trans-1,4-dichloro-2-b...	15.953	53	21127	40.63	ug/L	96
105) 1,2,3-trichloropropane	15.990	110	30457	47.63	ug/L	98
106) n-propylbenzene	16.052	91	457741	48.13	ug/L	100
107) 2-chlorotoluene	16.209	126	97136	49.99	ug/L	95
108) 4-chlorotoluene	16.319	91	238156	47.47	ug/L	98
110) 1,3,5-trimethylbenzene	16.225	105	356258	48.18	ug/L	99
111) tert-butylbenzene	16.617	134	76761	50.90	ug/L	93
112) 1,2,4-trimethylbenzene	16.664	105	346972	48.10	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd Inst : MSA
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
113) sec-butylbenzene	16.863	105	494992	51.36	ug/L	99
114) 1,3-dichlorobenzene	17.051	146	172612	48.68	ug/L	96
115) p-isopropyltoluene	16.994	119	404582	50.69	ug/L	99
116) 1,4-dichlorobenzene	17.140	146	172575	47.88	ug/L	100
117) 1,2-dichlorobenzene	17.579	146	180088	46.41	ug/L	97
119) n-butylbenzene	17.454	92	201747	48.10	ug/L	98
121) 1,2-dibromo-3-chloropr...	18.422	157	36750	50.67	ug/L	94
122) 1,3,5-trichlorobenzene	18.646	180	172851	47.06	ug/L	99
123) 2-ethylhexyl acrylate	19.358	70	17728	6.37	ug/L	93
124) 1,2,4-trichlorobenzene	19.368	180	158026	49.63	ug/L	98
125) hexachlorobutadiene	19.520	225	66252	49.67	ug/L	96
126) naphthalene	19.687	128	448765	55.56	ug/L	99
127) 1,2,3-trichlorobenzene	19.959	180	155714	54.10	ug/L	97
128) hexachloroethane	17.883	201	68987	49.48	ug/L	99
129) 2-methylnaphthalene	20.974	142	134492	42.48	ug/L	99

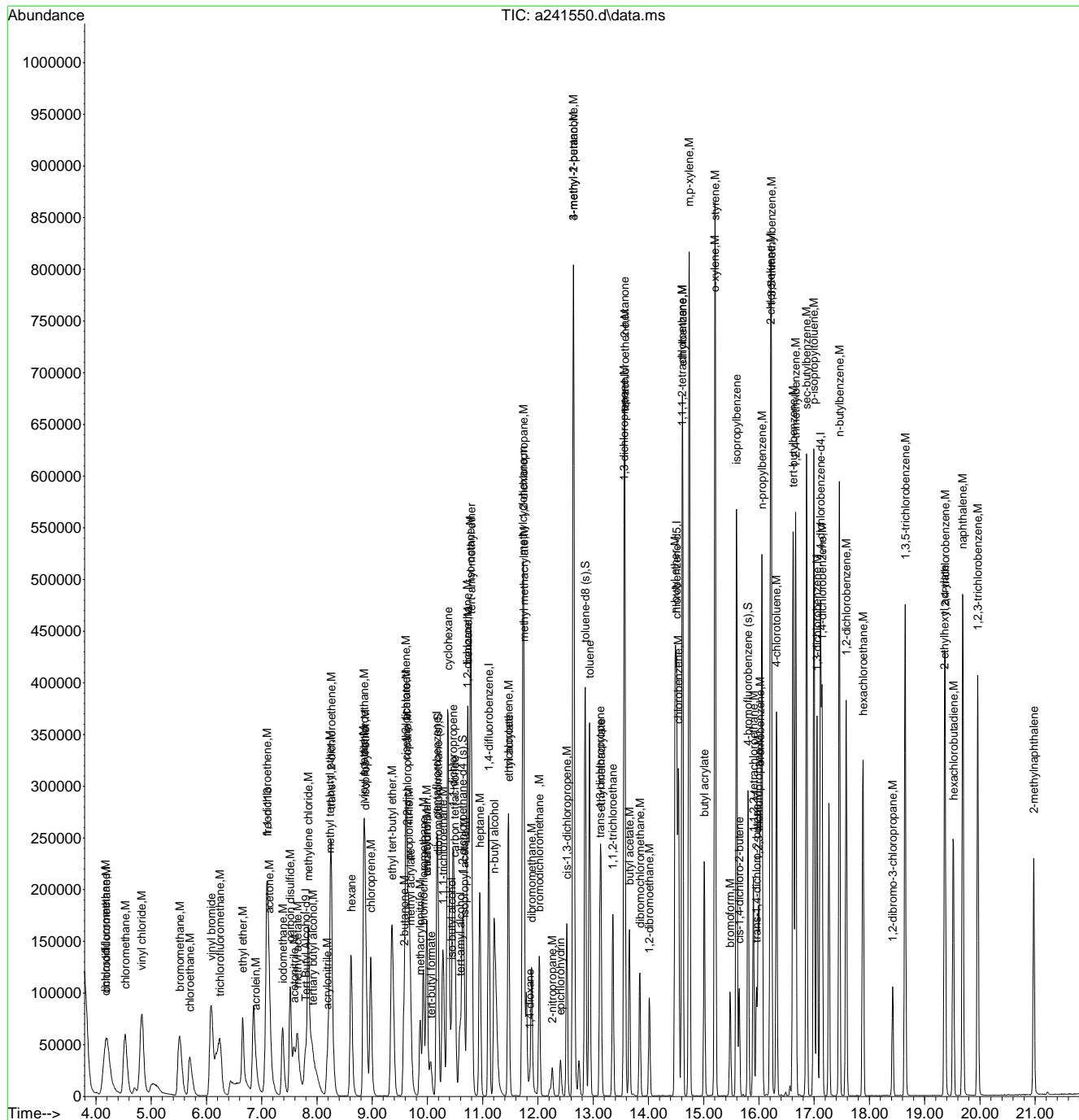
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.4.2
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241550.d
 Acq On : 10 May 2018 11:59 am
 Operator : oyinadei
 Sample : jc65633-9msd
 Misc : MS26140,VA9204,5,,,1
 ALS Vial : 10 Sample Multiplier: 1
 Inst : MSA

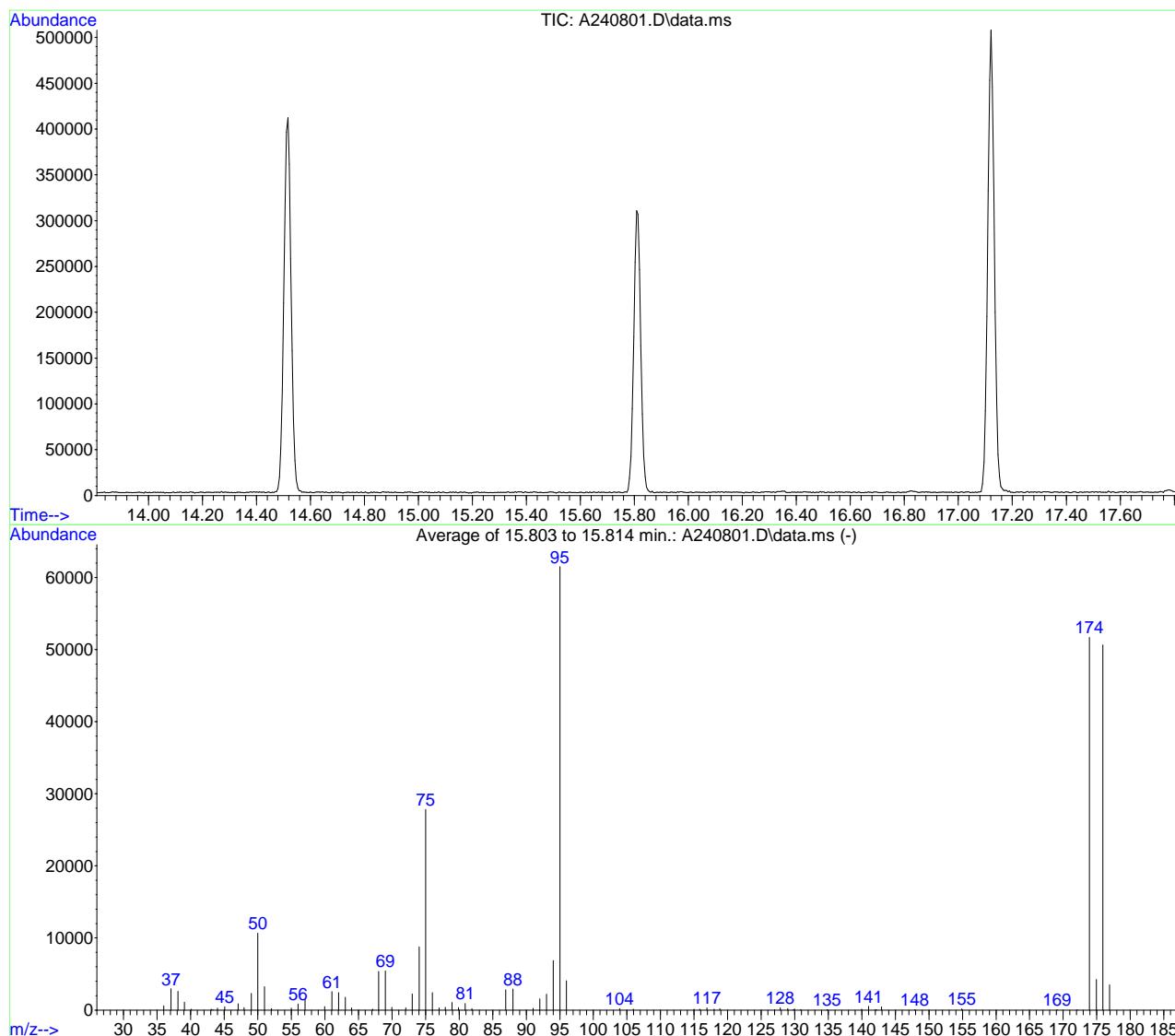
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:08:43 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration



SW-846 Method 8260

Data File : C:\msdchem\1\DATA\VA9165\A240801.D Vial: 1
 Acq On : 3 Apr 2018 5:23 pm Operator: JessicaP
 Sample : bfb Inst : MSA
 Misc : MS25128,VA9165,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2297, 2298, 2299; Background Corrected with Scan 2288

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	10680	PASS
75	95	30	60	45.2	27821	PASS
95	95	100	100	100.0	61501	PASS
96	95	5	9	6.6	4068	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	84.0	51685	PASS
175	174	5	9	8.3	4265	PASS
176	174	95	101	98.0	50666	PASS
177	176	5	9	6.9	3509	PASS

Average of 15.803 to 15.814 min.: A240801.D\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	599	49.05	2304	63.95	312	77.95	361
37.05	2955	50.00	10680	67.10	129	78.95	1053
38.10	2600	51.00	3244	68.00	5357	79.90	331
39.05	1108	52.05	185	69.00	5431	80.90	919
40.10	127	55.00	280	69.95	395	81.90	210
43.05	136	56.00	834	72.05	323	86.95	2804
43.30	51	57.05	1454	73.00	2242	88.00	2912
44.00	267	59.95	498	74.05	8748	91.00	237
45.05	449	61.05	2553	75.00	27821	92.00	1567
47.05	896	62.05	2432	76.00	2410	93.00	2195
47.95	350	63.05	1778	77.00	322	94.00	6867

Average of 15.803 to 15.814 min.: A240801.D\data.ms

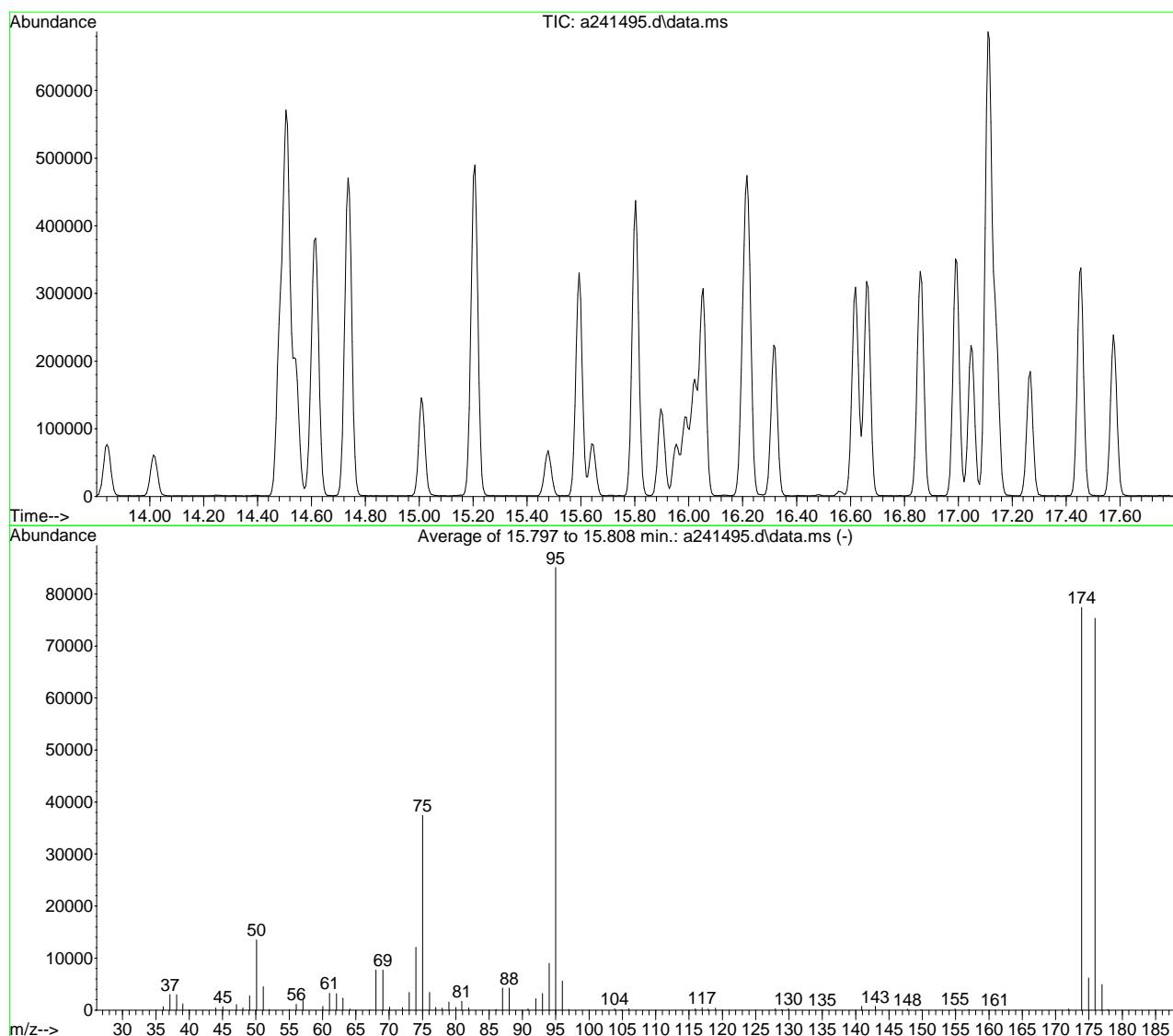
bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
95.00	61501	128.95	191	154.90	168		
96.00	4068	129.80	62	169.10	53		
103.90	211	129.95	164	172.10	53		
105.95	122	130.90	71	173.90	51685		
115.00	116	134.80	53	174.95	4265		
115.85	130	139.95	112	175.90	50666		
116.90	308	141.00	528	176.90	3509		
118.00	145	142.00	65				
118.85	202	142.20	51				
127.00	54	142.95	453				
127.85	307	147.90	54				

SW-846 Method 8260
 Data File : C:\msdchem\1\data\ja...9-18\va9204\A241495.d Vial: 2
 Acq On : 8 May 2018 6:46 am Operator: jessicap
 Sample : bfb Inst : MSA
 Misc : MS26069,VA9204,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2296, 2297, 2298; Background Corrected with Scan 2287

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.9	13507	PASS
75	95	30	60	44.0	37472	PASS
95	95	100	100	100.0	85083	PASS
96	95	5	9	6.6	5590	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	91.0	77392	PASS
175	174	5	9	8.0	6183	PASS
176	174	95	101	97.3	75331	PASS
177	176	5	9	6.5	4926	PASS

Average of 15.797 to 15.808 min.: a241495.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	662	51.10	4514	68.00	7722	80.00	531
37.10	3026	52.00	141	69.05	7732	80.90	1737
38.10	2933	55.05	148	70.05	590	81.95	433
39.05	1196	56.05	1100	72.00	465	86.05	126
40.00	28	57.05	1843	73.00	3422	87.00	4235
44.00	429	60.05	702	74.00	12060	88.00	4241
45.05	665	61.05	3239	75.00	37472	90.85	259
47.10	1044	62.10	3164	76.05	3412	92.00	2184
48.05	427	63.05	2296	77.00	517	93.00	3201
49.05	2769	64.10	228	77.95	396	94.00	8997
50.10	13507	67.10	98	78.95	1576	95.00	85083

Average of 15.797 to 15.808 min.: a241495.d\data.ms

bfb

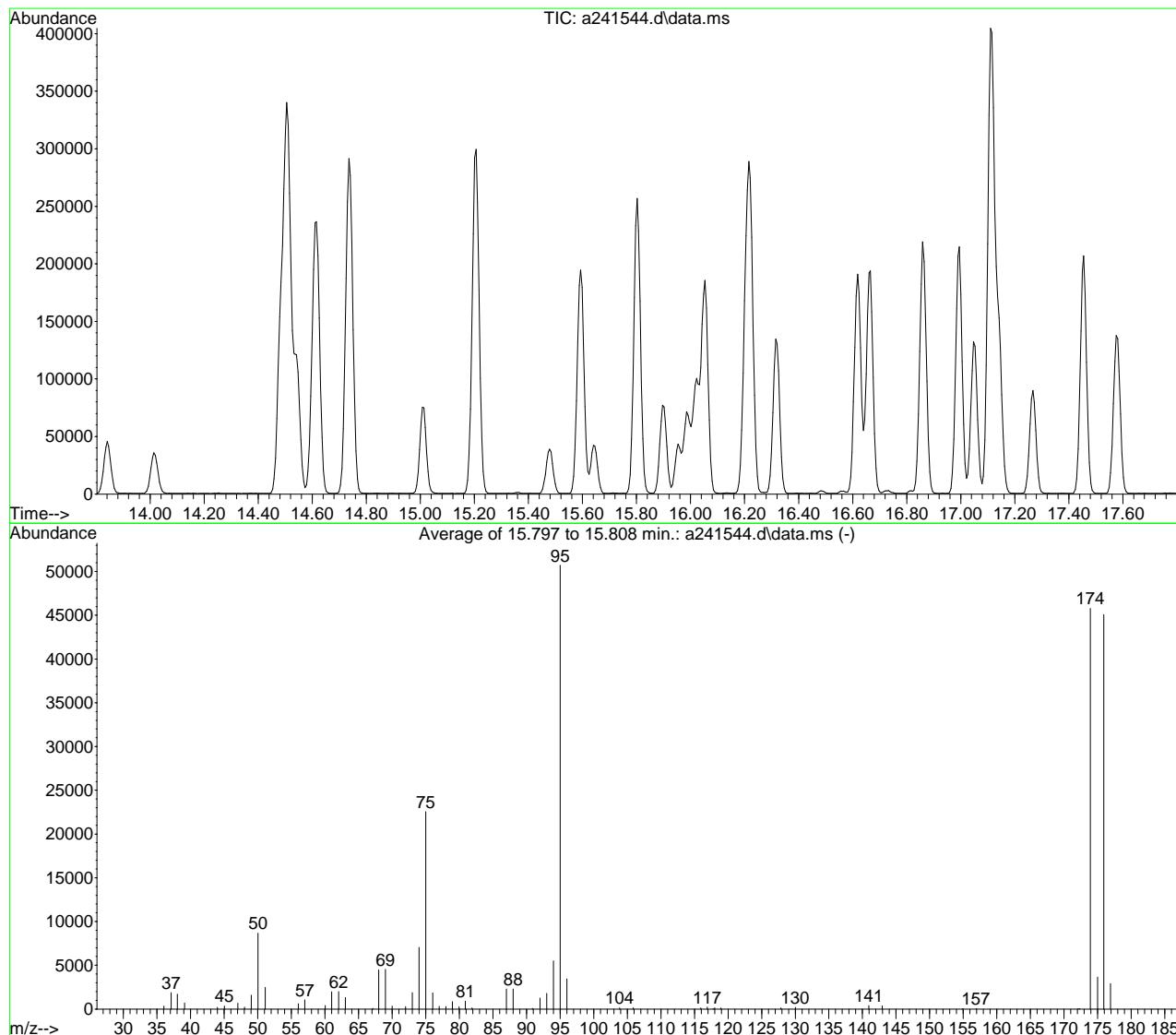
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.00	5590	129.90	316	174.95	6183		
96.95	150	135.00	55	175.90	75331		
103.85	288	140.90	702	176.95	4926		
104.80	52	142.95	722	177.85	113		
105.95	277	147.80	197				
115.95	294	149.80	64				
116.95	462	154.90	217				
117.90	212	157.00	78				
118.95	387	160.90	50				
127.95	279	171.95	217				
128.90	61	173.90	77392				

SW-846 Method 8260

Data File : C:\msdchem\1\data\kenrickb\va9206\A241544.d Vial: 4
 Acq On : 10 May 2018 8:31 am Operator: oyinadei
 Sample : bfb Inst : MSA
 Misc : MS26175,VA9206,5,,,,1 Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\MA9165.M (RTE Integrator)
 Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um



AutoFind: Scans 2296, 2297, 2298; Background Corrected with Scan 2287

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.1	8686	PASS
75	95	30	60	44.5	22573	PASS
95	95	100	100	100.0	50707	PASS
96	95	5	9	6.8	3456	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	90.3	45787	PASS
175	174	5	9	8.0	3648	PASS
176	174	95	101	98.4	45072	PASS
177	176	5	9	6.5	2908	PASS

Average of 15.797 to 15.808 min.: a241544.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	344	56.05	596	73.00	1867	88.00	2295
37.10	1888	57.00	1053	74.00	7039	90.90	62
38.05	1712	60.05	413	75.00	22573	92.00	1245
39.10	694	61.00	1954	76.05	1854	93.00	1793
44.00	201	62.05	1994	77.00	307	94.00	5512
45.05	345	63.05	1310	78.00	294	95.00	50707
47.05	679	67.10	65	78.95	830	96.00	3456
48.05	226	68.00	4474	79.95	257	103.85	130
49.05	1592	69.00	4537	80.90	893	105.85	126
50.05	8686	70.00	337	81.90	131	115.95	124
51.10	2466	72.00	276	87.00	2287	116.90	236

Average of 15.797 to 15.808 min.: a241544.d\data.ms

bfb

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
117.80	54	173.90	45787				
118.00	137	175.00	3648				
118.95	126	175.90	45072				
127.85	134	176.90	2908				
130.00	182						
140.95	397						
142.95	379						
154.90	54						
156.90	57						
172.10	54						
172.30	52						

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240802.D
 Acq On : 3 Apr 2018 5:52 pm
 Operator : JessicaP
 Sample : ic9165-0.2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 11:17:00 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:37:19 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.831	65	342580	500.00	ug/L	0.02
5) pentafluorobenzene	10.185	168	234670	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.121	114	348075	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	267015	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	149194	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.200	113	114906	49.13	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	98.26%	
55) 1,2-dichloroethane-d4 (s)	10.645	65	123441	49.78	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	=	99.56%	
77) toluene-d8 (s)	12.862	98	355597	49.84	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	99.68%	
101) 4-bromofluorobenzene (s)	15.807	95	119110	49.01	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	=	98.02%	

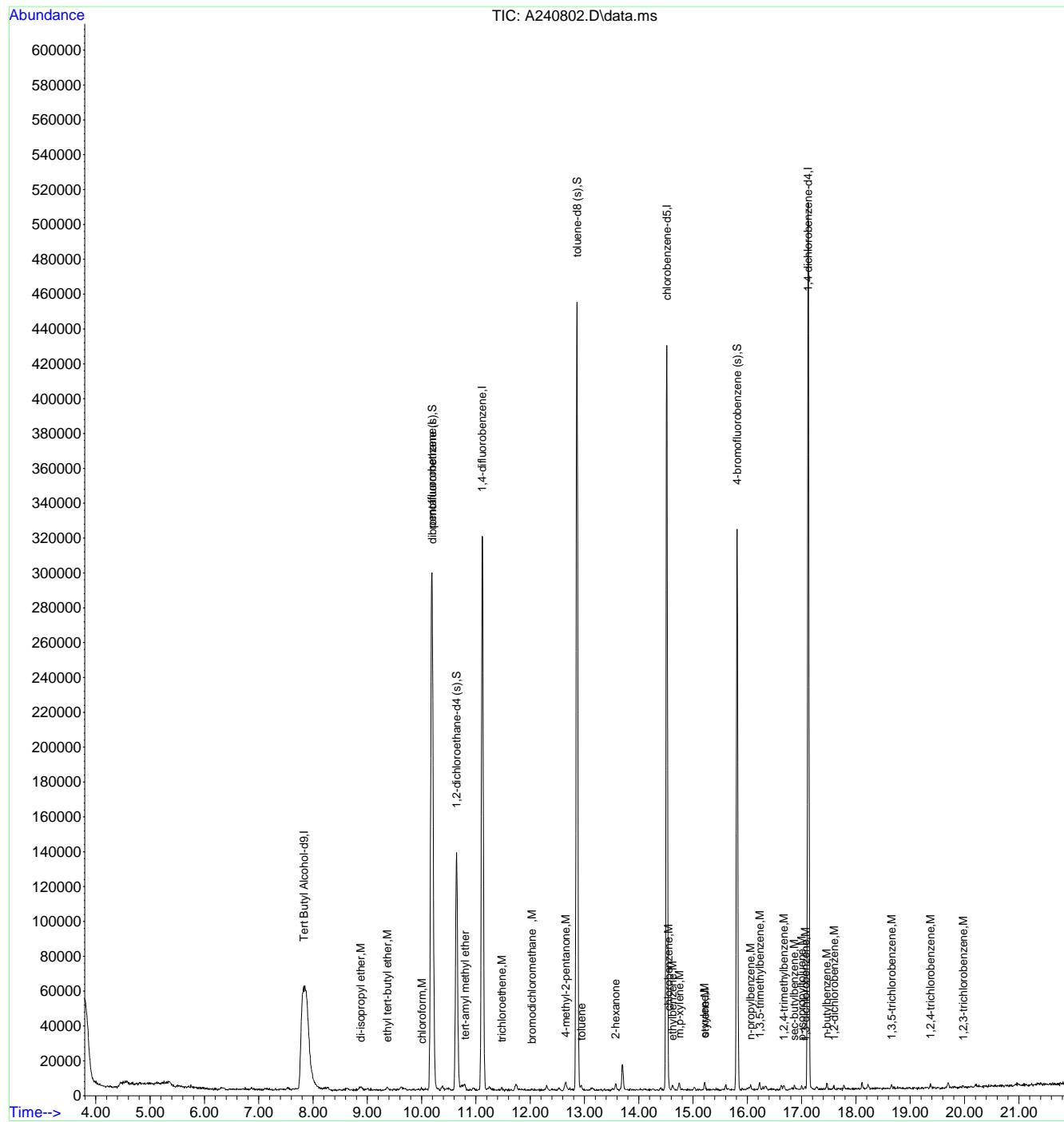
Target Compounds					Qvalue	
30) di-isopropyl ether	8.877	45	1927	0.23	ug/L	90
31) ethyl tert-butyl ether	9.369	59	1572	0.21	ug/L	98
44) chloroform	10.007	83	947	0.24	ug/L	85
58) tert-amyl methyl ether	10.802	73	1748	0.23	ug/L	# 62
64) trichloroethene	11.476	95	393	0.20	ug/L	# 55
71) bromodichloromethane	12.031	83	516	0.19	ug/L	83
74) 4-methyl-2-pentanone	12.648	58	968	0.77	ug/L	# 29
78) toluene	12.946	92	1025	0.23	ug/L	96
82) 2-hexanone	13.579	58	828	0.85	ug/L	89
90) chlorobenzene	14.552	112	895	0.20	ug/L	79
92) ethylbenzene	14.625	91	1836	0.23	ug/L	95
93) m,p-xylene	14.745	106	1406	0.47	ug/L	# 72
94) o-xylene	15.206	106	586	0.18	ug/L	# 67
95) styrene	15.216	104	999	0.21	ug/L	72
106) n-propylbenzene	16.058	91	2347	0.23	ug/L	90
110) 1,3,5-trimethylbenzene	16.225	105	1762	0.22	ug/L	92
112) 1,2,4-trimethylbenzene	16.670	105	1747	0.23	ug/L	89
113) sec-butylbenzene	16.869	105	2133	0.21	ug/L	94
114) 1,3-dichlorobenzene	17.067	146	849	0.22	ug/L	83
115) p-isopropyltoluene	17.000	119	1735	0.20	ug/L	91
117) 1,2-dichlorobenzene	17.591	146	857	0.21	ug/L	82
119) n-butylbenzene	17.465	92	1013	0.23	ug/L	97
122) 1,3,5-trichlorobenzene	18.652	180	888	0.23	ug/L	77
124) 1,2,4-trichlorobenzene	19.379	180	766	0.23	ug/L	95
127) 1,2,3-trichlorobenzene	19.970	180	632	0.21	ug/L	# 80

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240802.D
 Acq On : 3 Apr 2018 5:52 pm
 Operator : JessicaP
 Sample : ic9165-0.2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 05 11:17:00 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:37:19 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.813	65	347855	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	232400	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	336747	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	248278	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.118	152	146914	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.204	113	115871	49.93	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 99.86%		
55) 1,2-dichloroethane-d4 (s)	10.638	65	123162	51.32	ug/L	0.00
Spiked Amount	50.000	Range 81 - 124	Recovery	= 102.64%		
77) toluene-d8 (s)	12.860	98	343433	51.75	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 103.50%		
101) 4-bromofluorobenzene (s)	15.810	95	115335	48.09	ug/L	0.00
Spiked Amount	50.000	Range 80 - 120	Recovery	= 96.18%		

Target Compounds					Ovalue	
27) methyl tert butyl ether	8.268	73	2745	0.53	ug/L	# 51
28) trans-1,2-dichloroethene	8.279	96	1002	0.46	ug/L	# 76
30) di-isopropyl ether	8.896	45	4307	0.53	ug/L	74
31) ethyl tert-butyl ether	9.367	59	3462	0.46	ug/L	92
39) cis-1,2-dichloroethene	9.613	96	1330	0.54	ug/L	80
44) chloroform	10.000	83	1995	0.53	ug/L	88
48) cyclohexane	10.387	84	1861	0.52	ug/L	# 86
49) 1,1,1-trichloroethane	10.298	97	1698	0.49	ug/L	86
51) 1,1-dichloropropene	10.465	75	1501	0.52	ug/L	# 67
52) carbon tetrachloride	10.502	117	1535	0.51	ug/L	# 72
56) benzene	10.742	78	4636	0.55	ug/L	94
57) iso-octane	10.784	57	4478	0.54	ug/L	92
58) tert-amyl methyl ether	10.794	73	3840	0.53	ug/L	85
59) heptane	10.951	71	867	0.55	ug/L	# 57
62) n-butyl alcohol	11.223	56	3292	25.21	ug/L	92
64) trichloroethene	11.464	95	872	0.46	ug/L	82
66) methylcyclohexane	11.731	83	2344	0.55	ug/L	89
67) 2-chloroethyl vinyl ether	12.306	63	3506	2.80	ug/L	94
70) dibromomethane	11.898	93	644	0.50	ug/L	95
71) bromodichloromethane	12.039	83	1353	0.51	ug/L	93
73) cis-1,3-dichloropropene	12.531	75	1702	0.54	ug/L	66
74) 4-methyl-2-pentanone	12.651	58	2496	2.06	ug/L	# 84
78) toluene	12.939	92	2261	0.55	ug/L	100
79) trans-1,3-dichloropropene	13.132	75	1259	0.54	ug/L	# 51
81) 1,1,2-trichloroethane	13.368	83	582	0.46	ug/L	# 80
82) 2-hexanone	13.572	58	1830	2.04	ug/L	92
83) tetrachloroethene	13.577	166	772	0.47	ug/L	# 74
84) 1,3-dichloropropane	13.561	76	1367	0.56	ug/L	66
88) 1,2-dibromoethane	14.032	107	656	0.44	ug/L	95
90) chlorobenzene	14.555	112	2042	0.50	ug/L	91
91) 1,1,1,2-tetrachloroethane	14.613	131	1106	0.56	ug/L	# 75
92) ethylbenzene	14.623	91	3969	0.55	ug/L	89
93) m,p-xylene	14.743	106	2849	1.04	ug/L	100
94) o-xylene	15.209	106	1564	0.51	ug/L	# 71
95) styrene	15.214	104	2619	0.58	ug/L	98
97) bromoform	15.491	173	458	0.42	ug/L	78
98) isopropylbenzene	15.601	105	4238	0.51	ug/L	95
102) bromobenzene	16.035	156	980	0.50	ug/L	# 52
103) 1,1,2,2-tetrachloroethane	15.910	83	1456	0.51	ug/L	85
106) n-propylbenzene	16.061	91	4900	0.50	ug/L	92
107) 2-chlorotoluene	16.218	126	914	0.45	ug/L	# 72

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration

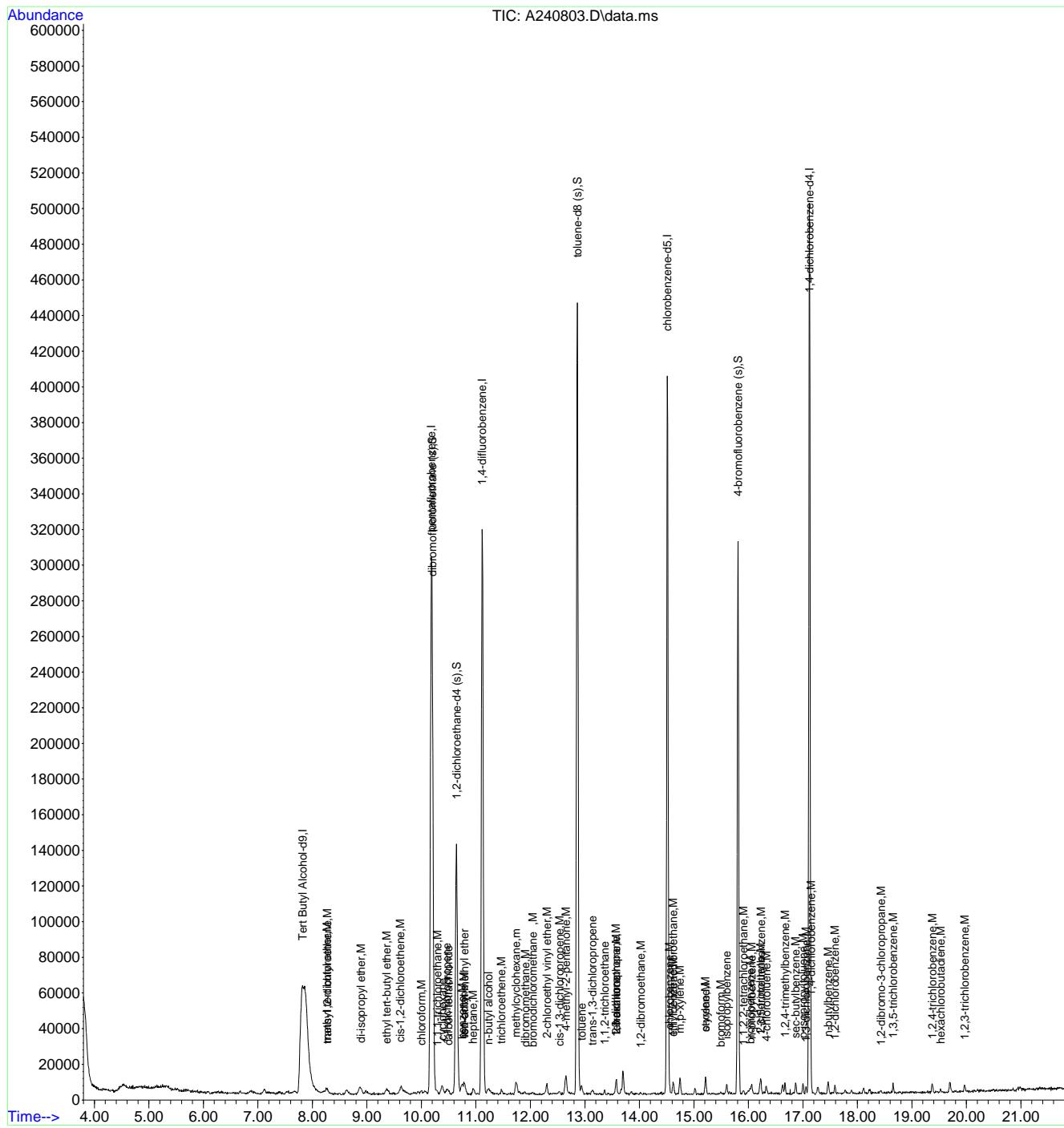
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) 4-chlorotoluene	16.328	91	2704	0.51	ug/L	73
110) 1,3,5-trimethylbenzene	16.234	105	3796	0.49	ug/L	85
112) 1,2,4-trimethylbenzene	16.673	105	3699	0.49	ug/L	90
113) sec-butylbenzene	16.867	105	4569	0.45	ug/L	92
114) 1,3-dichlorobenzene	17.055	146	1806	0.49	ug/L	97
115) p-isopropyltoluene	16.997	119	4022	0.48	ug/L	92
116) 1,4-dichlorobenzene	17.154	146	2097	0.55	ug/L	94
117) 1,2-dichlorobenzene	17.588	146	2311	0.57	ug/L	97
119) n-butylbenzene	17.463	92	2328	0.53	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.425	157	381	0.50	ug/L	71
122) 1,3,5-trichlorobenzene	18.655	180	1949	0.51	ug/L	86
124) 1,2,4-trichlorobenzene	19.372	180	1766	0.53	ug/L	93
125) hexachlorobutadiene	19.524	225	589	0.42	ug/L	79
127) 1,2,3-trichlorobenzene	19.968	180	1646	0.54	ug/L	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240803.D
 Acq On : 3 Apr 2018 6:21 pm
 Operator : JessicaP
 Sample : ic9165-0.5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 05 11:18:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:25:00 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\

Data File : A240804.D

Acq On : 3 Apr 2018 6:50 pm

Operator : JessicaP

Sample : ic9165-1

Misc : MS25128,VA9165,5,,,1

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018

Quant Method : C:\msdchem\1\METHODS\MA9165.M

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Thu Apr 05 10:25:00 2018

Response via : Initial Calibration

7.6.3

7

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	337056	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	227829	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	340121	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	264304	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	148873	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.201	113	114262	50.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.44%			
55) 1,2-dichloroethane-d4 (s)	10.640	65	120903	49.88	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 99.76%			
77) toluene-d8 (s)	12.863	98	354324	50.15	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.30%			
101) 4-bromofluorobenzene (s)	15.807	95	117856	48.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 97.00%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.988	59	3003	5.51	ug/L	55
7) dichlorodifluoromethane	4.170	85	3522	0.95	ug/L	81
10) chloromethane	4.505	50	5310	1.97	ug/L	80
11) vinyl chloride	4.798	62	4227	0.95	ug/L	62
13) bromomethane	5.525	94	2594	0.99	ug/L	77
14) chloroethane	5.708	64	3398	1.40	ug/L	74
15) vinyl bromide	6.095	106	2145	0.95	ug/L #	94
16) trichlorofluoromethane	6.194	101	3422	0.98	ug/L	71
17) ethyl ether	6.670	74	748	0.95	ug/L #	60
19) freon 113	7.110	151	1853	1.13	ug/L #	90
20) 1,1-dichloroethene	7.120	96	2122	1.03	ug/L #	74
21) acetone	7.157	58	1091	3.21	ug/L #	63
23) iodomethane	7.397	142	3461	1.13	ug/L	92
24) carbon disulfide	7.538	76	6985	1.18	ug/L	95
25) methylene chloride	7.852	84	2793	1.10	ug/L	90
27) methyl tert butyl ether	8.250	73	5639	1.10	ug/L	98
28) trans-1,2-dichloroethene	8.271	96	2510	1.19	ug/L	84
29) hexane	8.626	57	3788	1.22	ug/L	82
30) di-isopropyl ether	8.872	45	9081	1.14	ug/L	99
31) ethyl tert-butyl ether	9.359	59	7626	1.04	ug/L	91
32) 2-butanone	9.594	72	1452	4.31	ug/L #	87
33) 1,1-dichloroethane	8.856	63	5176	1.21	ug/L	97
34) chloroprene	8.987	53	3530	1.11	ug/L	91
38) 2,2-dichloropropane	9.651	77	4678	1.25	ug/L	84
39) cis-1,2-dichloroethene	9.625	96	2604	1.07	ug/L #	79
41) propionitrile	9.683	54	5626	10.32	ug/L	80
42) bromochloromethane	9.944	128	1673	1.39	ug/L #	56
44) chloroform	9.997	83	4057	1.10	ug/L	86
45) tert-butyl formate	10.065	59	2585	1.12	ug/L #	77
48) cyclohexane	10.373	84	3691	1.05	ug/L	92
49) 1,1,1-trichloroethane	10.300	97	3891	1.14	ug/L	84
51) 1,1-dichloropropene	10.473	75	3101	1.09	ug/L	84
52) carbon tetrachloride	10.499	117	3311	1.13	ug/L	90
56) benzene	10.739	78	9410	1.10	ug/L	96
57) iso-octane	10.771	57	9127	1.09	ug/L	94
58) tert-amyl methyl ether	10.797	73	7980	1.09	ug/L	91
59) heptane	10.954	71	1600	1.00	ug/L	94
61) 1,2-dichloroethane	10.729	62	3352	1.20	ug/L	88
62) n-butyl alcohol	11.215	56	7116	53.95	ug/L	92
63) ethyl acrylate	11.482	55	3569	1.19	ug/L	89
64) trichloroethene	11.472	95	2134	1.11	ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\

Data File : A240804.D

Acq On : 3 Apr 2018 6:50 pm

Operator : JessicaP

Sample : ic9165-1

Misc : MS25128,VA9165,5,,,1

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018

Quant Method : C:\msdchem\1\METHODS\MA9165.M

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Thu Apr 05 10:25:00 2018

Response via : Initial Calibration

7.6.3
7

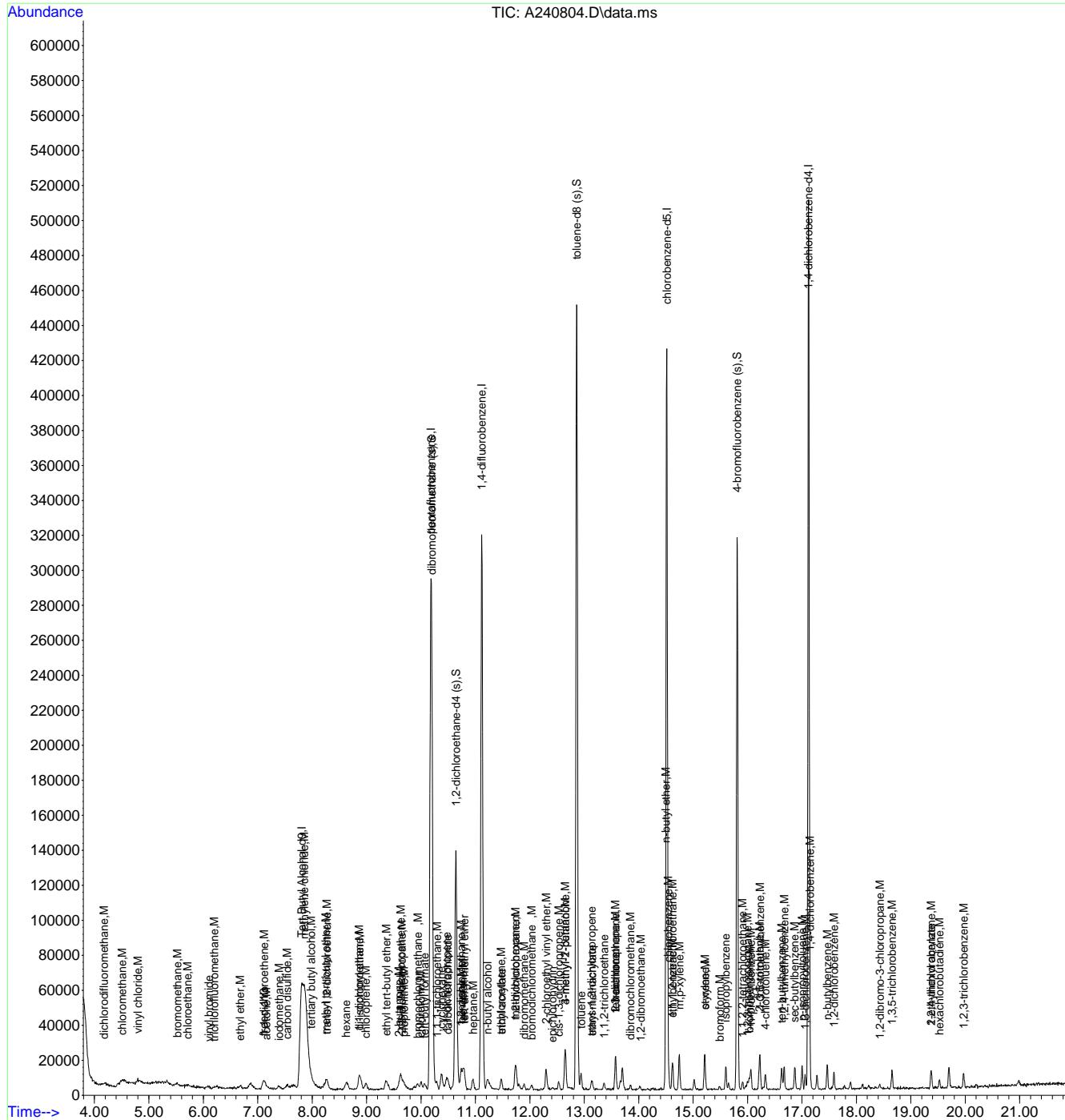
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
66) methylcyclohexane	11.733	83	4990	1.16	ug/L	95
67) 2-chloroethyl vinyl ether	12.298	63	6745	5.33	ug/L	88
69) 1,2-dichloropropane	11.743	63	2724	1.14	ug/L	94
70) dibromomethane	11.895	93	1320	1.02	ug/L	75
71) bromodichloromethane	12.031	83	2756	1.04	ug/L	91
72) epichlorohydrin	12.418	57	1876	5.49	ug/L #	82
73) cis-1,3-dichloropropene	12.528	75	3267	1.03	ug/L	78
74) 4-methyl-2-pentanone	12.643	58	5356	4.37	ug/L	94
75) 3-methyl-1-butanol	12.648	55	5389	23.65	ug/L	89
78) toluene	12.941	92	4738	1.08	ug/L #	80
79) trans-1,3-dichloropropene	13.135	75	2594	1.05	ug/L	96
80) ethyl methacrylate	13.145	69	1813	1.04	ug/L	85
81) 1,1,2-trichloroethane	13.360	83	1477	1.10	ug/L #	71
82) 2-hexanone	13.574	58	3998	4.19	ug/L	98
83) tetrachloroethene	13.579	166	1916	1.09	ug/L	90
84) 1,3-dichloropropane	13.564	76	2948	1.13	ug/L	96
87) dibromochloromethane	13.851	129	2132	1.15	ug/L	96
88) 1,2-dibromoethane	14.029	107	1652	1.04	ug/L	73
89) n-butyl ether	14.489	57	9242	1.10	ug/L	69
90) chlorobenzene	14.547	112	4668	1.08	ug/L	96
91) 1,1,1,2-tetrachloroethane	14.615	131	2051	0.98	ug/L	91
92) ethylbenzene	14.625	91	8396	1.09	ug/L	99
93) m,p-xylene	14.746	106	6003	2.06	ug/L	94
94) o-xylene	15.211	106	3563	1.09	ug/L	99
95) styrene	15.216	104	5079	1.06	ug/L	91
97) bromoform	15.488	173	1325	1.15	ug/L	85
98) isopropylbenzene	15.603	105	9344	1.06	ug/L	95
102) bromobenzene	16.032	156	2069	1.05	ug/L #	79
103) 1,1,2,2-tetrachloroethane	15.912	83	3083	1.08	ug/L	88
105) 1,2,3-trichloropropane	15.990	110	670	1.02	ug/L #	72
106) n-propylbenzene	16.058	91	10602	1.06	ug/L	93
107) 2-chlorotoluene	16.215	126	2161	1.04	ug/L	88
108) 4-chlorotoluene	16.325	91	5727	1.07	ug/L	91
110) 1,3,5-trimethylbenzene	16.226	105	7909	1.02	ug/L	94
111) tert-butylbenzene	16.623	134	1577	1.02	ug/L #	78
112) 1,2,4-trimethylbenzene	16.670	105	7825	1.03	ug/L	98
113) sec-butylbenzene	16.869	105	10350	1.01	ug/L	97
114) 1,3-dichlorobenzene	17.063	146	4143	1.11	ug/L	89
115) p-isopropyltoluene	17.005	119	8512	1.00	ug/L	96
116) 1,4-dichlorobenzene	17.151	146	4089	1.06	ug/L	92
117) 1,2-dichlorobenzene	17.591	146	4453	1.08	ug/L	93
119) n-butylbenzene	17.465	92	4642	1.05	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.433	157	846	1.09	ug/L	85
122) 1,3,5-trichlorobenzene	18.653	180	4406	1.14	ug/L	98
123) 2-ethylhexyl acrylate	19.369	70	651	0.22	ug/L #	81
124) 1,2,4-trichlorobenzene	19.374	180	3598	1.07	ug/L	85
125) hexachlorobutadiene	19.526	225	1498	1.05	ug/L	84
127) 1,2,3-trichlorobenzene	19.971	180	3216	1.05	ug/L	77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240804.D
Acq On : 3 Apr 2018 6:50 pm
Operator : JessicaP
Sample : ic9165-1
Misc : MS25128,VA9165,5,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 05 11:19:13 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:25:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240805.D
 Acq On : 3 Apr 2018 7:19 pm
 Operator : JessicaP
 Sample : ic9165-2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:16:51 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.818	65	336365	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	228978	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.118	114	337437	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	264870	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	149290	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.198	113	114134	49.91	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 99.82%			
55) 1,2-dichloroethane-d4 (s)	10.643	65	120256	50.00	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery = 100.00%			
77) toluene-d8 (s)	12.860	98	354560	50.08	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.16%			
101) 4-bromofluorobenzene (s)	15.810	95	119557	49.06	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 98.12%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.980	59	5891	10.83	ug/L	75
6) chlorodifluoromethane	4.194	51	7206	2.09	ug/L	97
7) dichlorodifluoromethane	4.162	85	8539	2.30	ug/L	81
10) chloromethane	4.502	50	9664	3.56	ug/L	98
11) vinyl chloride	4.801	62	9619	2.14	ug/L	99
13) bromomethane	5.507	94	5791	2.20	ug/L	95
14) chloroethane	5.716	64	5599	2.30	ug/L	95
15) vinyl bromide	6.082	106	4607	2.03	ug/L	98
16) trichlorofluoromethane	6.234	101	7625	2.18	ug/L	86
17) ethyl ether	6.673	74	1666	2.10	ug/L	89
18) acrolein	6.903	56	1569	2.49	ug/L	85
19) freon 113	7.097	151	3470	2.11	ug/L #	92
20) 1,1-dichloroethene	7.107	96	4261	2.05	ug/L	81
21) acetone	7.154	58	2741	8.02	ug/L	88
23) iodomethane	7.389	142	6059	1.97	ug/L	97
24) carbon disulfide	7.536	76	11700	1.97	ug/L	91
25) methylene chloride	7.860	84	4761	1.87	ug/L	94
26) methyl acetate	7.661	43	5640	2.24	ug/L #	84
27) methyl tert butyl ether	8.231	73	10080	1.96	ug/L	95
28) trans-1,2-dichloroethene	8.263	96	4090	1.92	ug/L	88
29) hexane	8.634	57	6322	2.03	ug/L	87
30) di-isopropyl ether	8.875	45	15821	1.98	ug/L	96
31) ethyl tert-butyl ether	9.372	59	14246	1.94	ug/L	97
32) 2-butanone	9.597	72	2422	7.15	ug/L #	72
33) 1,1-dichloroethane	8.859	63	8697	2.02	ug/L	98
34) chloroprene	8.985	53	6256	1.96	ug/L	92
35) acrylonitrile	8.200	53	1560	1.96	ug/L	84
37) ethyl acetate	9.623	45	859	1.98	ug/L #	1
38) 2,2-dichloropropane	9.649	77	8860	2.36	ug/L	93
39) cis-1,2-dichloroethene	9.623	96	4698	1.92	ug/L	96
41) propionitrile	9.696	54	10757	19.64	ug/L	89
42) bromochloromethane	9.931	128	3149	2.60	ug/L #	77
43) tetrahydrofuran	9.999	42	1990	2.15	ug/L	68
44) chloroform	9.994	83	7311	1.97	ug/L	97
45) tert-butyl formate	10.057	59	4643	2.01	ug/L	84
47) methacrylonitrile	9.879	67	1454	1.81	ug/L	90
48) cyclohexane	10.376	84	7328	2.08	ug/L	94
49) 1,1,1-trichloroethane	10.292	97	7192	2.09	ug/L	89
50) iso-butyl alcohol	10.444	43	5045	21.71	ug/L	93
51) 1,1-dichloropropene	10.470	75	5394	1.88	ug/L	91
52) carbon tetrachloride	10.507	117	5761	1.96	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240805.D
 Acq On : 3 Apr 2018 7:19 pm
 Operator : JessicaP
 Sample : ic9165-2
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:16:51 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
53) tert-amyl alcohol	10.595	73	3121	10.64	ug/L	94
56) benzene	10.737	78	16941	2.00	ug/L	96
57) iso-octane	10.779	57	16001	1.92	ug/L	96
58) tert-amyl methyl ether	10.794	73	14696	2.03	ug/L	98
59) heptane	10.946	71	3484	2.19	ug/L	86
61) 1,2-dichloroethane	10.731	62	5330	1.92	ug/L	98
62) n-butyl alcohol	11.218	56	12838	98.11	ug/L	90
63) ethyl acrylate	11.474	55	5970	2.01	ug/L	98
64) trichloroethene	11.474	95	3771	1.97	ug/L	81
65) 2-nitropropane	12.274	41	1530	1.87	ug/L #	83
66) methylcyclohexane	11.736	83	8478	1.98	ug/L	91
67) 2-chloroethyl vinyl ether	12.301	63	11971	9.53	ug/L	98
69) 1,2-dichloropropane	11.746	63	4853	2.06	ug/L	92
70) dibromomethane	11.893	93	2604	2.02	ug/L #	80
71) bromodichloromethane	12.034	83	5133	1.95	ug/L	97
72) epichlorohydrin	12.416	57	3087	9.11	ug/L	89
73) cis-1,3-dichloropropene	12.525	75	6169	1.96	ug/L	97
74) 4-methyl-2-pentanone	12.651	58	9885	8.12	ug/L	99
75) 3-methyl-1-butanol	12.651	55	8569	37.91	ug/L	99
78) toluene	12.939	92	8875	2.01	ug/L	96
79) trans-1,3-dichloropropene	13.132	75	4901	1.97	ug/L	95
80) ethyl methacrylate	13.148	69	3590	2.05	ug/L	95
81) 1,1,2-trichloroethane	13.357	83	2670	1.99	ug/L	89
82) 2-hexanone	13.577	58	7788	8.15	ug/L	95
83) tetrachloroethene	13.582	166	3323	1.89	ug/L	88
84) 1,3-dichloropropane	13.566	76	5320	2.04	ug/L	94
87) dibromochloromethane	13.849	129	3531	1.91	ug/L	95
88) 1,2-dibromoethane	14.021	107	3107	1.96	ug/L	97
89) n-butyl ether	14.487	57	16913	2.01	ug/L	82
90) chlorobenzene	14.555	112	8580	1.98	ug/L	96
91) 1,1,1,2-tetrachloroethane	14.612	131	4206	2.01	ug/L	96
92) ethylbenzene	14.628	91	15268	1.98	ug/L	98
93) m,p-xylene	14.748	106	11320	3.88	ug/L	97
94) o-xylene	15.208	106	6381	1.95	ug/L	84
95) styrene	15.214	104	9548	2.00	ug/L	95
96) butyl acrylate	15.015	55	8442	2.07	ug/L	94
97) bromoform	15.486	173	2225	1.92	ug/L	95
98) isopropylbenzene	15.601	105	17447	1.98	ug/L	94
99) cis-1,4-dichloro-2-butene	15.648	75	1885	2.07	ug/L	90
102) bromobenzene	16.030	156	3842	1.94	ug/L	92
103) 1,1,2,2-tetrachloroethane	15.909	83	5571	1.94	ug/L	89
104) trans-1,4-dichloro-2-b...	15.962	53	800	1.93	ug/L #	78
105) 1,2,3-trichloropropane	15.998	110	1375	2.09	ug/L	91
106) n-propylbenzene	16.061	91	19434	1.94	ug/L	96
107) 2-chlorotoluene	16.213	126	3919	1.89	ug/L	91
108) 4-chlorotoluene	16.328	91	10676	1.99	ug/L	97
110) 1,3,5-trimethylbenzene	16.228	105	14320	1.83	ug/L	95
111) tert-butylbenzene	16.631	134	2646	1.71	ug/L #	92
112) 1,2,4-trimethylbenzene	16.673	105	13964	1.84	ug/L	97
113) sec-butylbenzene	16.866	105	18576	1.81	ug/L	98
114) 1,3-dichlorobenzene	17.060	146	7171	1.92	ug/L	85
115) p-isopropyltoluene	17.002	119	15692	1.84	ug/L	91
116) 1,4-dichlorobenzene	17.149	146	7281	1.89	ug/L	95
117) 1,2-dichlorobenzene	17.583	146	8016	1.94	ug/L	92
119) n-butylbenzene	17.463	92	8597	1.94	ug/L	97
121) 1,2-dibromo-3-chloropr...	18.430	157	1551	2.00	ug/L	86
122) 1,3,5-trichlorobenzene	18.655	180	7072	1.83	ug/L	97
123) 2-ethylhexyl acrylate	19.372	70	1246	0.42	ug/L #	59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240805.D
Acq On : 3 Apr 2018 7:19 pm
Operator : JessicaP
Sample : ic9165-2
Misc : MS25128,VA9165,5,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:16:51 2018
Response via : Initial Calibration

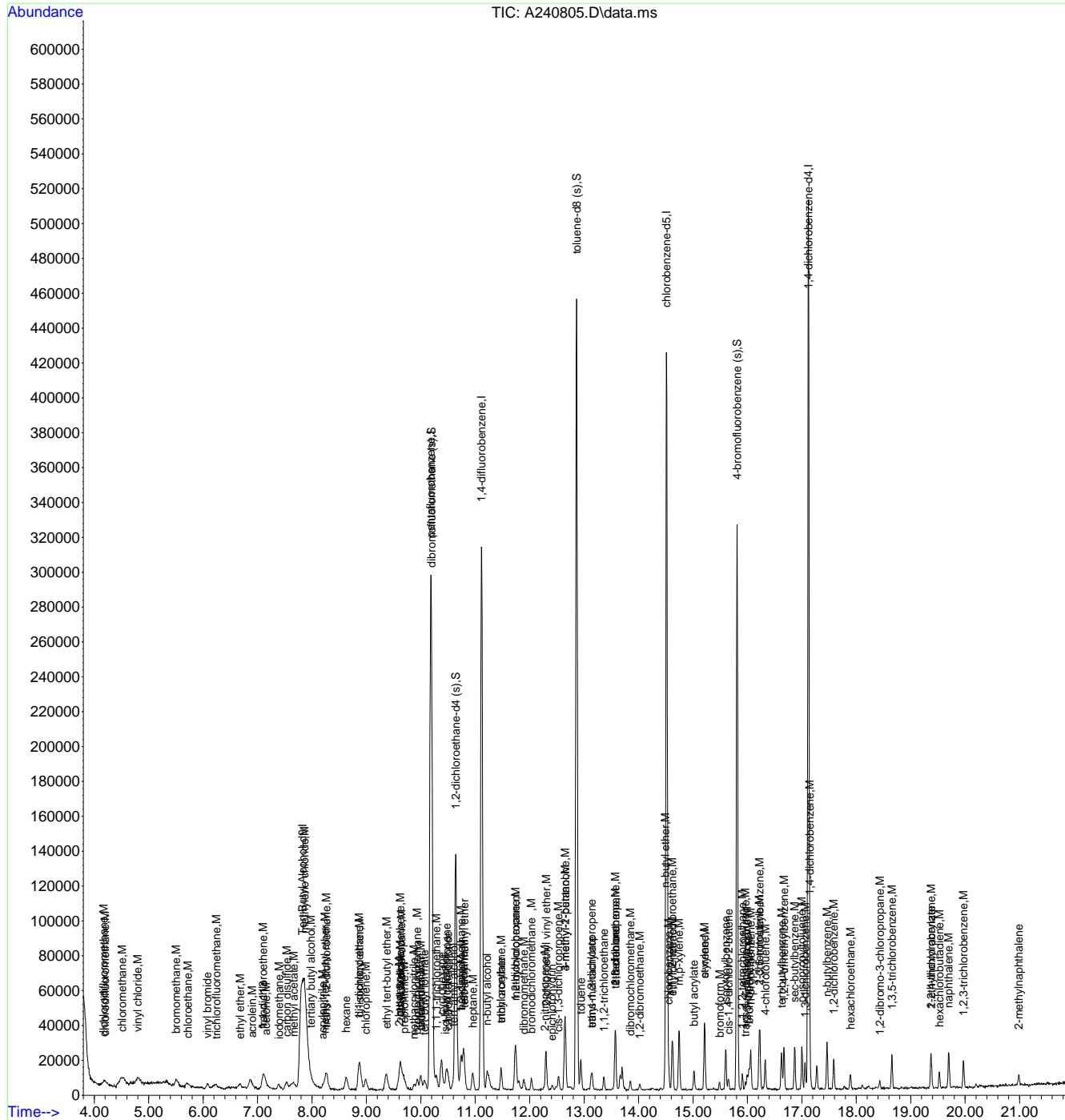
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
124) 1,2,4-trichlorobenzene	19.377	180	6330	1.88	ug/L	93
125) hexachlorobutadiene	19.523	225	2632	1.84	ug/L	92
126) naphthalene	19.696	128	18776	2.00	ug/L	98
127) 1,2,3-trichlorobenzene	19.968	180	5821	1.90	ug/L	99
128) hexachloroethane	17.897	201	1727	1.75	ug/L	97
129) 2-methylnaphthalene	20.988	142	3382	0.93	ug/L #	63

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240805.D
Acq On : 3 Apr 2018 7:19 pm
Operator : JessicaP
Sample : ic9165-2
Misc : MS25128,VA9165,5,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 05 11:19:26 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:16:51 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.860	65	352844	500.00	ug/L	0.05
5) pentafluorobenzene	10.183	168	239218	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	357986	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	275388	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	154792	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.204	113	120777	50.56	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.12%			
55) 1,2-dichloroethane-d4 (s)	10.643	65	127966	50.16	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery = 100.32%			
77) toluene-d8 (s)	12.860	98	371950	50.53	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.06%			
101) 4-bromofluorobenzene (s)	15.810	95	123424	48.84	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 97.68%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.981	59	15530	27.23	ug/L	88
4) 1,4-dioxane	11.877	88	5258	157.59	ug/L	91
6) chlorodifluoromethane	4.210	51	19097	5.30	ug/L	92
7) dichlorodifluoromethane	4.189	85	20339	5.25	ug/L	87
10) chloromethane	4.518	50	22411	7.91	ug/L	91
11) vinyl chloride	4.816	62	24119	5.14	ug/L	92
13) bromomethane	5.517	94	13796	5.02	ug/L	95
14) chloroethane	5.716	64	12796	5.04	ug/L	97
15) vinyl bromide	6.098	106	12220	5.16	ug/L	98
16) trichlorofluoromethane	6.229	101	18991	5.19	ug/L	87
17) ethyl ether	6.684	74	4478	5.40	ug/L	86
18) acrolein	6.919	56	3791	5.76	ug/L	93
19) freon 113	7.118	151	9543	5.55	ug/L	97
20) 1,1-dichloroethene	7.118	96	11854	5.47	ug/L	95
21) acetone	7.175	58	7218	20.22	ug/L	92
22) acetonitrile	7.615	41	31646	49.32	ug/L	94
23) iodomethane	7.395	142	15885	4.94	ug/L	96
24) carbon disulfide	7.541	76	30946	4.99	ug/L	96
25) methylene chloride	7.860	84	13424	5.06	ug/L	93
26) methyl acetate	7.672	43	14321	5.45	ug/L	93
27) methyl tert butyl ether	8.247	73	26187	4.88	ug/L	95
28) trans-1,2-dichloroethene	8.274	96	11663	5.25	ug/L	92
29) hexane	8.629	57	16148	4.96	ug/L	94
30) di-isopropyl ether	8.886	45	41683	4.98	ug/L	89
31) ethyl tert-butyl ether	9.372	59	38219	4.99	ug/L	98
32) 2-butanone	9.592	72	7639	21.59	ug/L	94
33) 1,1-dichloroethane	8.865	63	22222	4.93	ug/L	97
34) chloroprene	8.990	53	16897	5.06	ug/L	93
35) acrylonitrile	8.221	53	4912	5.90	ug/L	86
36) vinyl acetate	8.865	86	2172	5.74	ug/L #	71
37) ethyl acetate	9.618	45	2394	5.27	ug/L #	49
38) 2,2-dichloropropane	9.644	77	17916	4.57	ug/L	94
39) cis-1,2-dichloroethene	9.628	96	13118	5.14	ug/L	99
40) methyl acrylate	9.712	85	1480	5.27	ug/L #	30
41) propionitrile	9.681	54	27781	48.56	ug/L	83
42) bromochloromethane	9.937	128	7159	5.66	ug/L	90
43) tetrahydrofuran	10.005	42	5515	5.71	ug/L	86
44) chloroform	10.000	83	20069	5.18	ug/L	96
45) tert-butyl formate	10.062	59	12318	5.09	ug/L	96
47) methacrylonitrile	9.895	67	4270	5.09	ug/L #	68
48) cyclohexane	10.381	84	17962	4.88	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.292	97	18061	5.03	ug/L	98
50) iso-butyl alcohol	10.444	43	10499	43.25	ug/L	94
51) 1,1-dichloropropene	10.470	75	14900	4.98	ug/L	93
52) carbon tetrachloride	10.507	117	15043	4.89	ug/L	100
53) tert-amyl alcohol	10.606	73	8300	27.09	ug/L	89
56) benzene	10.742	78	45475	5.06	ug/L	98
57) iso-octane	10.784	57	43058	4.87	ug/L	96
58) tert-amyl methyl ether	10.795	73	38903	5.06	ug/L	97
59) heptane	10.957	71	8500	5.03	ug/L	94
60) isopropyl acetate	10.669	87	2669	4.14	ug/L #	78
61) 1,2-dichloroethane	10.737	62	14406	4.89	ug/L	98
62) n-butyl alcohol	11.218	56	34373	247.61	ug/L	97
63) ethyl acrylate	11.474	55	13789	4.38	ug/L	97
64) trichloroethene	11.469	95	10032	4.94	ug/L	90
65) 2-nitropropane	12.269	41	4172	4.80	ug/L #	78
66) methylcyclohexane	11.736	83	22447	4.95	ug/L	99
67) 2-chloroethyl vinyl ether	12.296	63	30865	23.17	ug/L	99
68) methyl methacrylate	11.757	100	2017	5.56	ug/L #	74
69) 1,2-dichloropropane	11.746	63	11923	4.76	ug/L	95
70) dibromomethane	11.893	93	6811	4.99	ug/L	98
71) bromodichloromethane	12.034	83	14016	5.02	ug/L	98
72) epichlorohydrin	12.416	57	8448	23.49	ug/L	96
73) cis-1,3-dichloropropene	12.531	75	16071	4.80	ug/L	92
74) 4-methyl-2-pentanone	12.651	58	25380	19.66	ug/L	95
75) 3-methyl-1-butanol	12.646	55	22868	95.36	ug/L	100
78) toluene	12.944	92	22588	4.93	ug/L	96
79) trans-1,3-dichloropropene	13.132	75	12610	4.88	ug/L	98
80) ethyl methacrylate	13.148	69	9149	5.02	ug/L	97
81) 1,1,2-trichloroethane	13.363	83	7294	5.22	ug/L	97
82) 2-hexanone	13.572	58	20445	20.57	ug/L	98
83) tetrachloroethene	13.582	166	9595	5.24	ug/L	86
84) 1,3-dichloropropane	13.567	76	13085	4.82	ug/L	99
85) butyl acetate	13.661	56	11481	4.37	ug/L	98
87) dibromochloromethane	13.849	129	9400	4.88	ug/L	97
88) 1,2-dibromoethane	14.027	107	8696	5.27	ug/L	92
89) n-butyl ether	14.487	57	44230	5.06	ug/L	95
90) chlorobenzene	14.550	112	22541	5.01	ug/L	98
91) 1,1,2-tetrachloroethane	14.613	131	11209	5.15	ug/L	90
92) ethylbenzene	14.623	91	39676	4.95	ug/L	95
93) m,p-xylene	14.743	106	30504	10.06	ug/L	100
94) o-xylene	15.209	106	17029	5.01	ug/L	94
95) styrene	15.214	104	24951	5.02	ug/L	97
96) butyl acrylate	15.020	55	21962	5.17	ug/L	97
97) bromoform	15.486	173	6361	5.28	ug/L	94
98) isopropylbenzene	15.601	105	45384	4.96	ug/L	96
99) cis-1,4-dichloro-2-butene	15.648	75	4922	5.21	ug/L	89
102) bromobenzene	16.030	156	9917	4.82	ug/L	93
103) 1,1,2,2-tetrachloroethane	15.904	83	14388	4.83	ug/L	95
104) trans-1,4-dichloro-2-b...	15.957	53	2264	5.26	ug/L #	78
105) 1,2,3-trichloropropane	15.993	110	3514	5.15	ug/L	83
106) n-propylbenzene	16.061	91	49277	4.75	ug/L	99
107) 2-chlorotoluene	16.218	126	10026	4.65	ug/L	97
108) 4-chlorotoluene	16.323	91	26560	4.77	ug/L	97
110) 1,3,5-trimethylbenzene	16.229	105	38661	4.77	ug/L	98
111) tert-butylbenzene	16.626	134	7295	4.53	ug/L	96
112) 1,2,4-trimethylbenzene	16.673	105	37416	4.75	ug/L	99
113) sec-butylbenzene	16.867	105	50516	4.74	ug/L	100
114) 1,3-dichlorobenzene	17.060	146	18837	4.85	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration

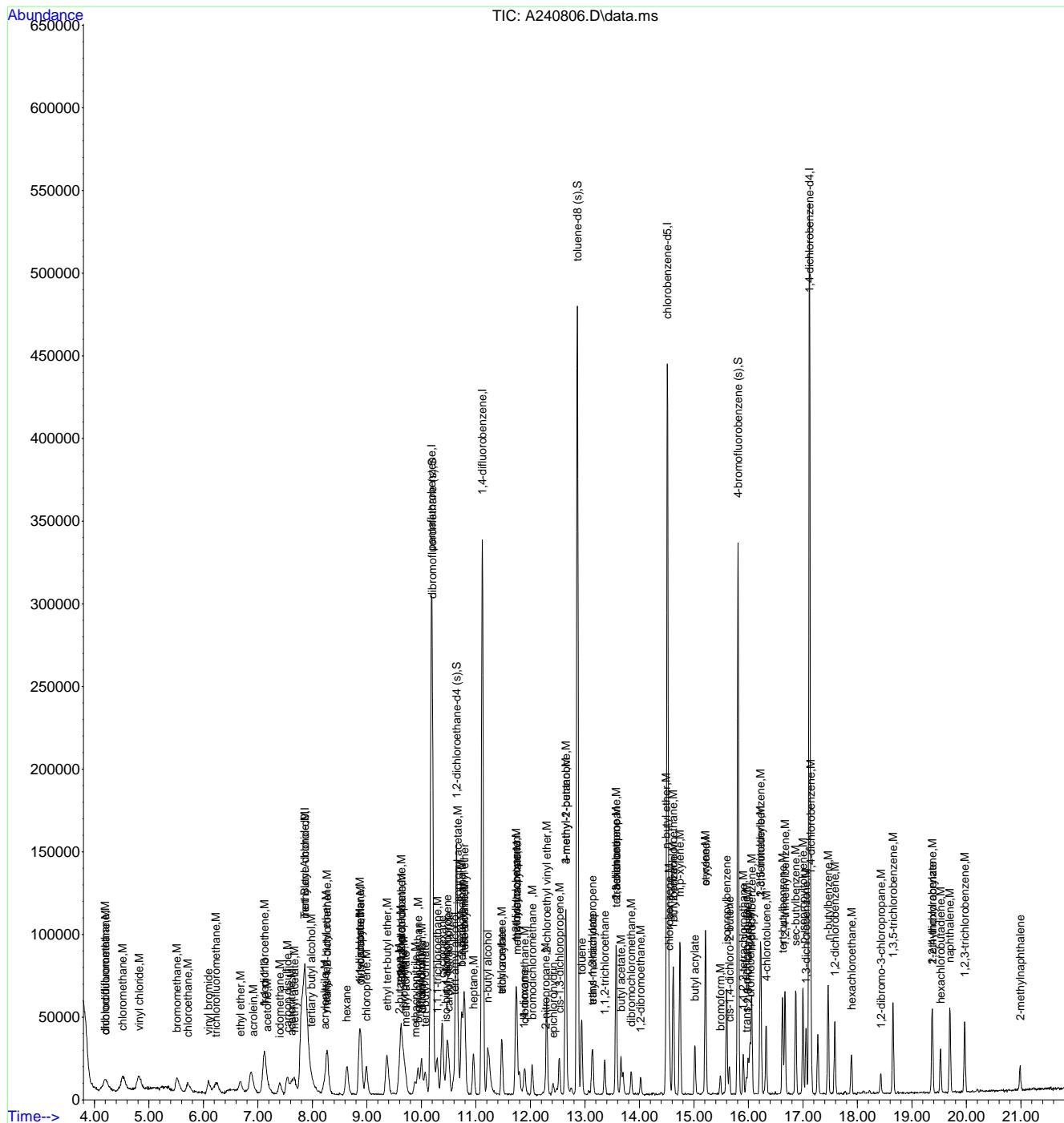
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.003	119	42124	4.77	ug/L	96
116) 1,4-dichlorobenzene	17.149	146	20148	5.04	ug/L	98
117) 1,2-dichlorobenzene	17.583	146	20355	4.75	ug/L	98
119) n-butylbenzene	17.463	92	22112	4.82	ug/L	92
121) 1,2-dibromo-3-chloropr...	18.431	157	4190	5.21	ug/L	98
122) 1,3,5-trichlorobenzene	18.655	180	20199	5.03	ug/L	95
123) 2-ethylhexyl acrylate	19.367	70	2988	0.97	ug/L	96
124) 1,2,4-trichlorobenzene	19.377	180	17321	4.97	ug/L	98
125) hexachlorobutadiene	19.529	225	7254	4.90	ug/L	94
126) naphthalene	19.696	128	46863	4.83	ug/L	98
127) 1,2,3-trichlorobenzene	19.968	180	15566	4.89	ug/L	99
128) hexachloroethane	17.892	201	4666	4.57	ug/L	95
129) 2-methylnaphthalene	20.988	142	8555	2.28	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240806.D
 Acq On : 3 Apr 2018 7:48 pm
 Operator : JessicaP
 Sample : ic9165-5
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 05 11:19:56 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:18:54 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.821	65	346557	500.00	ug/L	0.01
5) pentafluorobenzene	10.180	168	242039	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	358831	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	266952	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	150789	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.201	113	120339	49.79	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	99.58%		
55) 1,2-dichloroethane-d4 (s)	10.640	65	130960	51.21	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	102.42%		
77) toluene-d8 (s)	12.863	98	373315	52.32	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	104.64%		
101) 4-bromofluorobenzene (s)	15.807	95	118221	48.03	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	96.06%		

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.962	59	31977	57.08	ug/L	93
4) 1,4-dioxane	11.859	88	9177	280.04	ug/L	95
6) chlorodifluoromethane	4.186	51	38686	10.61	ug/L	94
7) dichlorodifluoromethane	4.191	85	41986	10.70	ug/L	96
10) chloromethane	4.510	50	43435	15.15	ug/L	96
11) vinyl chloride	4.819	62	47335	9.97	ug/L	96
13) bromomethane	5.514	94	26814	9.65	ug/L	97
14) chloroethane	5.708	64	23942	9.31	ug/L	96
15) vinyl bromide	6.095	106	24869	10.38	ug/L	99
16) trichlorofluoromethane	6.247	101	38366	10.36	ug/L	97
17) ethyl ether	6.676	74	9560	11.39	ug/L	91
18) acrolein	6.911	56	7147	10.74	ug/L	94
19) freon 113	7.104	151	19816	11.39	ug/L	100
20) 1,1-dichloroethene	7.110	96	23118	10.54	ug/L	95
21) acetone	7.162	58	16306	45.15	ug/L	91
22) acetonitrile	7.627	41	60295	92.87	ug/L	97
23) iodomethane	7.397	142	31816	9.77	ug/L	92
24) carbon disulfide	7.533	76	60451	9.63	ug/L	99
25) methylene chloride	7.852	84	25683	9.56	ug/L	96
26) methyl acetate	7.669	43	27751	10.44	ug/L	99
27) methyl tert butyl ether	8.245	73	54215	9.98	ug/L	99
28) trans-1,2-dichloroethene	8.271	96	23345	10.38	ug/L	96
29) hexane	8.632	57	32616	9.89	ug/L	97
30) di-isopropyl ether	8.883	45	84870	10.03	ug/L	93
31) ethyl tert-butyl ether	9.369	59	80738	10.41	ug/L	98
32) 2-butanone	9.594	72	15914	44.46	ug/L	96
33) 1,1-dichloroethane	8.862	63	45209	9.91	ug/L	95
34) chloroprene	8.992	53	34873	10.32	ug/L	98
35) acrylonitrile	8.203	53	9898	11.75	ug/L	86
36) vinyl acetate	8.851	86	4394	11.47	ug/L #	54
37) ethyl acetate	9.610	45	4867	10.60	ug/L #	49
38) 2,2-dichloropropane	9.646	77	36999	9.33	ug/L	95
39) cis-1,2-dichloroethene	9.625	96	26511	10.26	ug/L	97
40) methyl acrylate	9.688	85	2923	10.29	ug/L #	73
41) propionitrile	9.683	54	58568	101.17	ug/L	99
42) bromochloromethane	9.934	128	13605	10.63	ug/L	95
43) tetrahydrofuran	9.986	42	10365	10.61	ug/L	97
44) chloroform	10.002	83	39285	10.01	ug/L	98
45) tert-butyl formate	10.065	59	24916	10.19	ug/L	98
47) methacrylonitrile	9.876	67	8794	10.36	ug/L	94
48) cyclohexane	10.378	84	37785	10.14	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.290	97	36164	9.96	ug/L	97
50) iso-butyl alcohol	10.441	43	22278	90.70	ug/L	95
51) 1,1-dichloropropene	10.473	75	30447	10.06	ug/L	96
52) carbon tetrachloride	10.499	117	30854	9.91	ug/L	99
53) tert-amyl alcohol	10.598	73	16839	54.32	ug/L	94
56) benzene	10.739	78	91759	10.19	ug/L	99
57) iso-octane	10.781	57	88215	9.96	ug/L	99
58) tert-amyl methyl ether	10.792	73	78852	10.23	ug/L	97
59) heptane	10.949	71	17450	10.30	ug/L	96
60) isopropyl acetate	10.671	87	5595	8.65	ug/L #	86
61) 1,2-dichloroethane	10.734	62	28905	9.79	ug/L	97
62) n-butyl alcohol	11.215	56	70642	507.69	ug/L	97
63) ethyl acrylate	11.477	55	29395	9.32	ug/L	99
64) trichloroethene	11.472	95	21378	10.51	ug/L	95
65) 2-nitropropane	12.261	41	7830	8.99	ug/L #	56
66) methylcyclohexane	11.733	83	46850	10.30	ug/L	98
67) 2-chloroethyl vinyl ether	12.298	63	65137	48.79	ug/L	98
68) methyl methacrylate	11.754	100	4138	11.38	ug/L #	85
69) 1,2-dichloropropane	11.749	63	23676	9.43	ug/L	99
70) dibromomethane	11.895	93	13949	10.19	ug/L	100
71) bromodichloromethane	12.031	83	28561	10.20	ug/L	96
72) epichlorohydrin	12.413	57	16765	46.51	ug/L	97
73) cis-1,3-dichloropropene	12.528	75	33385	9.95	ug/L	99
74) 4-methyl-2-pentanone	12.648	58	51691	39.94	ug/L	96
75) 3-methyl-1-butanol	12.648	55	46763	194.54	ug/L	98
78) toluene	12.941	92	47508	10.69	ug/L	100
79) trans-1,3-dichloropropene	13.130	75	26418	10.55	ug/L	96
80) ethyl methacrylate	13.145	69	19443	11.00	ug/L	92
81) 1,1,2-trichloroethane	13.360	83	14743	10.88	ug/L	98
82) 2-hexanone	13.569	58	42763	44.39	ug/L	96
83) tetrachloroethene	13.579	166	19445	10.95	ug/L	96
84) 1,3-dichloropropane	13.564	76	26118	9.93	ug/L	99
85) butyl acetate	13.658	56	18783	7.37	ug/L	94
87) dibromochloromethane	13.851	129	19020	10.19	ug/L	97
88) 1,2-dibromoethane	14.024	107	17294	10.81	ug/L	97
89) n-butyl ether	14.489	57	87765	10.36	ug/L	98
90) chlorobenzene	14.552	112	44425	10.18	ug/L	97
91) 1,1,2-tetrachloroethane	14.615	131	22884	10.84	ug/L	98
92) ethylbenzene	14.625	91	80539	10.36	ug/L	98
93) m,p-xylene	14.746	106	62773	21.36	ug/L	99
94) o-xylene	15.211	106	35097	10.66	ug/L	100
95) styrene	15.216	104	49296	10.23	ug/L	98
96) butyl acrylate	15.018	55	43397	10.53	ug/L	99
97) bromoform	15.488	173	12503	10.71	ug/L	97
98) isopropylbenzene	15.603	105	98206	11.06	ug/L	97
99) cis-1,4-dichloro-2-butene	15.650	75	10120	11.05	ug/L	98
102) bromobenzene	16.032	156	19411	9.69	ug/L	91
103) 1,1,2,2-tetrachloroethane	15.907	83	29028	10.00	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	4018	9.59	ug/L	100
105) 1,2,3-trichloropropane	15.990	110	7035	10.58	ug/L	93
106) n-propylbenzene	16.058	91	102906	10.19	ug/L	95
107) 2-chlorotoluene	16.215	126	20954	9.98	ug/L	89
108) 4-chlorotoluene	16.325	91	54369	10.03	ug/L	98
110) 1,3,5-trimethylbenzene	16.231	105	79676	10.10	ug/L	99
111) tert-butylbenzene	16.628	134	16172	10.32	ug/L	94
112) 1,2,4-trimethylbenzene	16.670	105	78109	10.17	ug/L	98
113) sec-butylbenzene	16.869	105	106532	10.27	ug/L	99
114) 1,3-dichlorobenzene	17.057	146	38749	10.25	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration

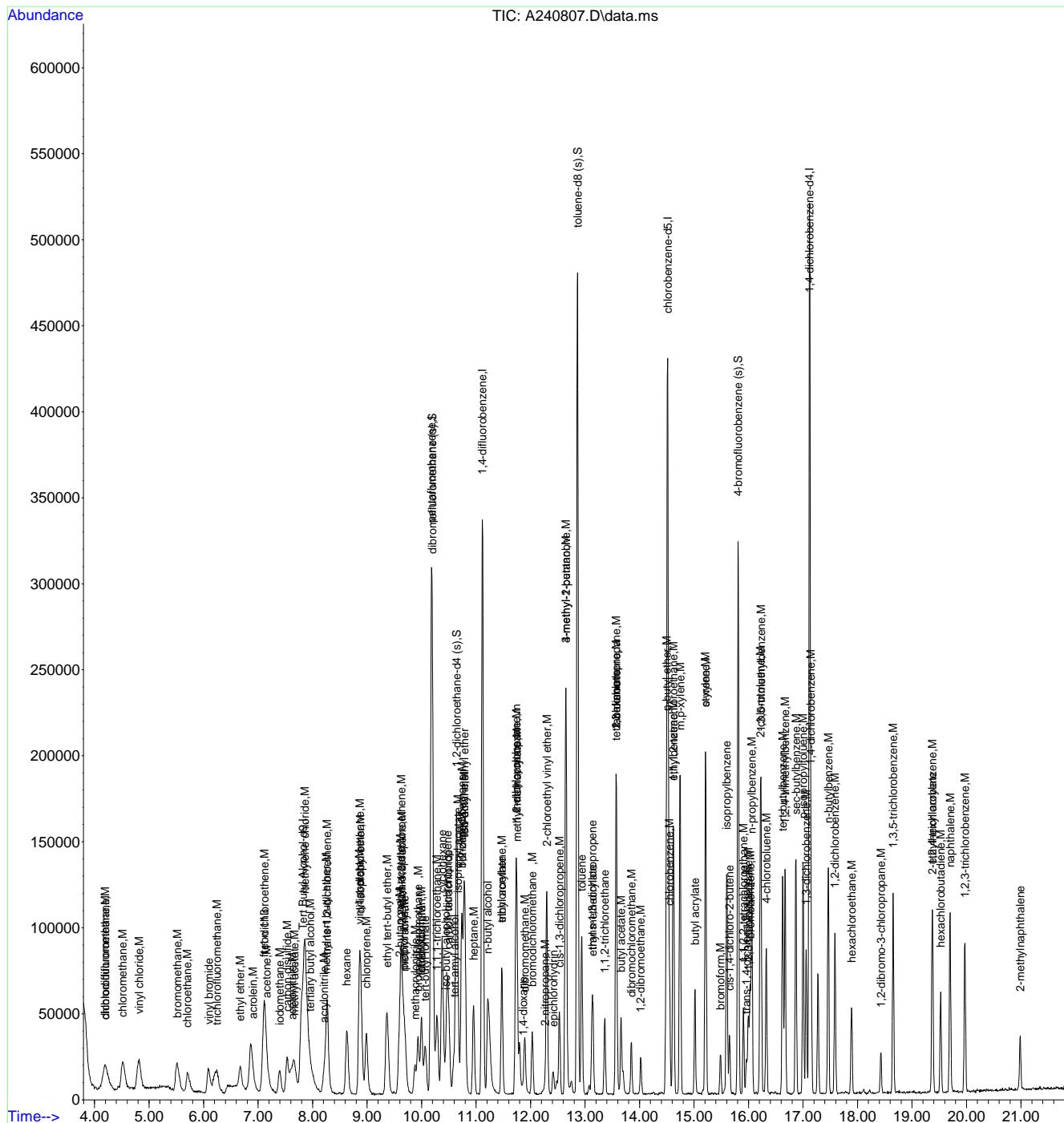
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	88645	10.30	ug/L	99
116) 1,4-dichlorobenzene	17.146	146	39566	10.16	ug/L	97
117) 1,2-dichlorobenzene	17.586	146	42875	10.26	ug/L	97
119) n-butylbenzene	17.465	92	45792	10.25	ug/L	99
121) 1,2-dibromo-3-chloropr...	18.428	157	8292	10.58	ug/L	94
122) 1,3,5-trichlorobenzene	18.653	180	41177	10.53	ug/L	99
123) 2-ethylhexyl acrylate	19.364	70	6514	2.17	ug/L	96
124) 1,2,4-trichlorobenzene	19.374	180	36606	10.79	ug/L	98
125) hexachlorobutadiene	19.526	225	15008	10.41	ug/L	98
126) naphthalene	19.699	128	95507	10.10	ug/L	100
127) 1,2,3-trichlorobenzene	19.971	180	32516	10.49	ug/L	94
128) hexachloroethane	17.889	201	10514	10.58	ug/L	97
129) 2-methylnaphthalene	20.985	142	18026	4.93	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240807.D
 Acq On : 3 Apr 2018 8:17 pm
 Operator : JessicaP
 Sample : ic9165-10
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 05 10:23:12 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:21:09 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.813	65	349678	500.00	ug/L	0.00
5) pentafluorobenzene	10.177	168	241916	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.119	114	366081	50.00	ug/L	0.00
76) chlorobenzene-d5	14.513	117	287596	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.123	152	156192	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.204	113	120506	49.88	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 99.76%			
55) 1,2-dichloroethane-d4 (s)	10.643	65	133865	51.31	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery = 102.62%			
77) toluene-d8 (s)	12.861	98	390360	50.78	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.56%			
101) 4-bromofluorobenzene (s)	15.810	95	126146	49.47	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 98.94%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.976	59	62902	111.28	ug/L	95
4) 1,4-dioxane	11.856	88	18246	551.81	ug/L	98
6) chlorodifluoromethane	4.189	51	74780	20.52	ug/L	98
7) dichlorodifluoromethane	4.205	85	82438	21.03	ug/L	96
10) chloromethane	4.518	50	85314	29.78	ug/L	98
11) vinyl chloride	4.806	62	94959	20.01	ug/L	100
13) bromomethane	5.512	94	52552	18.92	ug/L	96
14) chloroethane	5.700	64	45755	17.81	ug/L	95
15) vinyl bromide	6.093	106	49588	20.70	ug/L	99
16) trichlorofluoromethane	6.229	101	76439	20.65	ug/L	98
17) ethyl ether	6.673	74	18307	21.83	ug/L	80
18) acrolein	6.909	56	14680	22.07	ug/L	95
19) freon 113	7.113	151	38286	22.02	ug/L	100
20) 1,1-dichloroethene	7.113	96	44890	20.47	ug/L	97
21) acetone	7.170	58	30007	83.12	ug/L	97
22) acetonitrile	7.604	41	117520	181.10	ug/L	96
23) iodomethane	7.395	142	61759	18.98	ug/L	96
24) carbon disulfide	7.536	76	116645	18.59	ug/L	97
25) methylene chloride	7.855	84	51641	19.24	ug/L	96
26) methyl acetate	7.662	43	51589	19.41	ug/L	99
27) methyl tert butyl ether	8.242	73	108937	20.06	ug/L	100
28) trans-1,2-dichloroethene	8.263	96	45396	20.20	ug/L	97
29) hexane	8.635	57	61997	18.81	ug/L	99
30) di-isopropyl ether	8.880	45	168490	19.92	ug/L	98
31) ethyl tert-butyl ether	9.362	59	156864	20.23	ug/L	98
32) 2-butanone	9.586	72	31347	87.62	ug/L	99
33) 1,1-dichloroethane	8.859	63	86808	19.04	ug/L	100
34) chloroprene	8.985	53	69109	20.47	ug/L	97
35) acrylonitrile	8.206	53	19201	22.80	ug/L	89
36) vinyl acetate	8.854	86	8988	23.48	ug/L	98
37) ethyl acetate	9.613	45	9755	21.25	ug/L #	53
38) 2,2-dichloropropane	9.649	77	71042	17.92	ug/L	93
39) cis-1,2-dichloroethene	9.623	96	51471	19.93	ug/L	98
40) methyl acrylate	9.707	85	6560	23.10	ug/L #	61
41) propionitrile	9.686	54	117119	202.42	ug/L	95
42) bromochloromethane	9.937	128	26650	20.83	ug/L	98
43) tetrahydrofuran	10.000	42	20214	20.70	ug/L	95
44) chloroform	10.000	83	78662	20.06	ug/L	99
45) tert-butyl formate	10.068	59	50649	20.72	ug/L	99
47) methacrylonitrile	9.879	67	17499	20.62	ug/L	94
48) cyclohexane	10.381	84	74778	20.08	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.287	97	71690	19.76	ug/L	98
50) iso-butyl alcohol	10.455	43	44264	180.31	ug/L	92
51) 1,1-dichloropropene	10.470	75	59934	19.82	ug/L	99
52) carbon tetrachloride	10.502	117	62900	20.20	ug/L	99
53) tert-amyl alcohol	10.601	73	32486	104.85	ug/L	95
56) benzene	10.737	78	181257	19.74	ug/L	98
57) iso-octane	10.784	57	174817	19.35	ug/L	99
58) tert-amyl methyl ether	10.795	73	156800	19.95	ug/L	99
59) heptane	10.957	71	33882	19.61	ug/L	98
60) isopropyl acetate	10.664	87	11641	17.64	ug/L #	89
61) 1,2-dichloroethane	10.732	62	56647	18.80	ug/L	96
62) n-butyl alcohol	11.218	56	137432	968.13	ug/L	98
63) ethyl acrylate	11.475	55	60546	18.83	ug/L	99
64) trichloroethene	11.469	95	41989	20.24	ug/L	94
65) 2-nitropropane	12.264	41	14462	16.27	ug/L #	61
66) methylcyclohexane	11.736	83	91566	19.73	ug/L	99
67) 2-chloroethyl vinyl ether	12.296	63	130596	95.88	ug/L	98
68) methyl methacrylate	11.757	100	8629	23.26	ug/L #	82
69) 1,2-dichloropropane	11.746	63	47079	18.38	ug/L	98
70) dibromomethane	11.893	93	27841	19.94	ug/L	98
71) bromodichloromethane	12.034	83	57419	20.09	ug/L	97
72) epichlorohydrin	12.416	57	33560	91.27	ug/L	98
73) cis-1,3-dichloropropene	12.531	75	65478	19.13	ug/L	98
74) 4-methyl-2-pentanone	12.651	58	104435	79.09	ug/L	97
75) 3-methyl-1-butanol	12.646	55	92143	375.74	ug/L	99
78) toluene	12.939	92	95194	19.89	ug/L	98
79) trans-1,3-dichloropropene	13.127	75	54397	20.16	ug/L	96
80) ethyl methacrylate	13.148	69	39120	20.55	ug/L	96
81) 1,1,2-trichloroethane	13.363	83	29662	20.32	ug/L	96
82) 2-hexanone	13.572	58	83886	80.82	ug/L	98
83) tetrachloroethene	13.577	166	39148	20.46	ug/L	96
84) 1,3-dichloropropane	13.567	76	55284	19.52	ug/L	96
85) butyl acetate	13.661	56	34879	12.71	ug/L	98
87) dibromochloromethane	13.849	129	37509	18.66	ug/L	94
88) 1,2-dibromoethane	14.022	107	35203	20.43	ug/L	98
89) n-butyl ether	14.487	57	186279	20.41	ug/L	99
90) chlorobenzene	14.550	112	92779	19.73	ug/L	98
91) 1,1,2-tetrachloroethane	14.618	131	47031	20.68	ug/L	96
92) ethylbenzene	14.623	91	169620	20.26	ug/L	100
93) m,p-xylene	14.743	106	129043	40.75	ug/L	98
94) o-xylene	15.209	106	74059	20.87	ug/L	94
95) styrene	15.214	104	103055	19.85	ug/L	100
96) butyl acrylate	15.015	55	87038	19.61	ug/L	98
97) bromoform	15.486	173	26372	20.97	ug/L	99
98) isopropylbenzene	15.601	105	201938	21.12	ug/L	98
99) cis-1,4-dichloro-2-butene	15.648	75	19912	20.17	ug/L	95
102) bromobenzene	16.025	156	40973	19.74	ug/L	97
103) 1,1,2,2-tetrachloroethane	15.904	83	60227	20.02	ug/L	97
104) trans-1,4-dichloro-2-b...	15.962	53	8302	19.13	ug/L	95
105) 1,2,3-trichloropropane	15.993	110	14309	20.77	ug/L	95
106) n-propylbenzene	16.061	91	210507	20.12	ug/L	99
107) 2-chlorotoluene	16.213	126	44207	20.33	ug/L	100
108) 4-chlorotoluene	16.323	91	110986	19.76	ug/L	98
110) 1,3,5-trimethylbenzene	16.229	105	164634	20.15	ug/L	99
111) tert-butylbenzene	16.626	134	34494	21.25	ug/L	93
112) 1,2,4-trimethylbenzene	16.673	105	162775	20.46	ug/L	100
113) sec-butylbenzene	16.867	105	224782	20.92	ug/L	99
114) 1,3-dichlorobenzene	17.060	146	80049	20.44	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240808.D
 Acq On : 3 Apr 2018 8:46 pm
 Operator : JessicaP
 Sample : ic9165-20
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.003	119	183615	20.59	ug/L	99
116) 1,4-dichlorobenzene	17.149	146	80537	19.97	ug/L	99
117) 1,2-dichlorobenzene	17.589	146	86374	19.96	ug/L	97
119) n-butylbenzene	17.463	92	95475	20.64	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.431	157	16162	19.91	ug/L	96
122) 1,3,5-trichlorobenzene	18.656	180	82024	20.25	ug/L	99
123) 2-ethylhexyl acrylate	19.362	70	12292	3.95	ug/L	97
124) 1,2,4-trichlorobenzene	19.377	180	71983	20.48	ug/L	97
125) hexachlorobutadiene	19.524	225	30567	20.48	ug/L	95
126) naphthalene	19.696	128	182627	18.64	ug/L	100
127) 1,2,3-trichlorobenzene	19.968	180	65187	20.30	ug/L	97
128) hexachloroethane	17.892	201	21621	21.00	ug/L	96
129) 2-methylnaphthalene	20.983	142	35730	9.43	ug/L	97

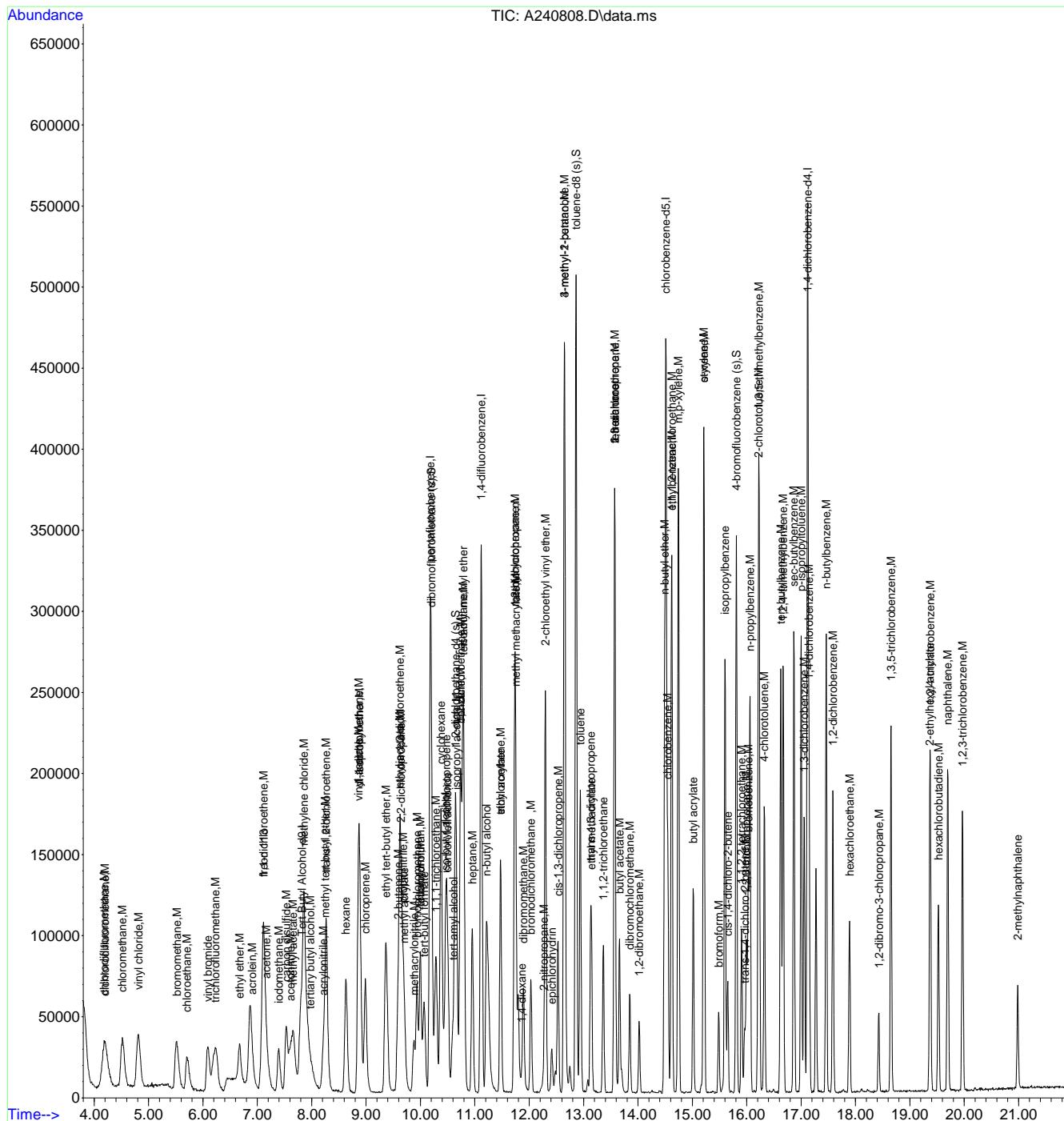
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240808.D
Acq On : 3 Apr 2018 8:46 pm
Operator : JessicaP
Sample : ic9165-20
Misc : MS25128,VA9165,5,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 05 10:06:36 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:00:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	357008	500.00	ug/L	0.00
5) pentafluorobenzene	10.179	168	243372	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.115	114	377674	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	314675	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.119	152	153458	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.200	113	120595	44.39	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	88.78%		
55) 1,2-dichloroethane-d4 (s)	10.644	65	133037	39.00	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery =	78.00%#		
77) toluene-d8 (s)	12.862	98	419154	49.39	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	98.78%		
101) 4-bromofluorobenzene (s)	15.806	95	127993	46.36	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	92.72%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.940	59	156024	199.21	ug/L	95
4) 1,4-dioxane	11.858	88	49510	1114.96	ug/L	91
6) chlorodifluoromethane	4.185	51	183842	23.38	ug/L	99
7) dichlorodifluoromethane	4.180	85	210993	30.45	ug/L	98
10) chloromethane	4.525	50	221383	23.28	ug/L	98
11) vinyl chloride	4.818	62	243230	29.68	ug/L	98
13) bromomethane	5.513	94	131537	28.03	ug/L	99
14) chloroethane	5.702	64	110939	28.21	ug/L	94
15) vinyl bromide	6.089	106	124459	29.75	ug/L	99
16) trichlorofluoromethane	6.225	101	192185	29.74	ug/L	97
17) ethyl ether	6.675	74	43430	29.66	ug/L	91
18) acrolein	6.905	56	34328	41.41	ug/L	88
19) freon 113	7.103	151	93663	36.52	ug/L	90
20) 1,1-dichloroethene	7.103	96	107296	37.97	ug/L	87
21) acetone	7.151	58	73275	157.75	ug/L #	74
22) acetonitrile	7.600	41	284108	284.28	ug/L	98
23) iodomethane	7.391	142	149535	29.17	ug/L	94
24) carbon disulfide	7.527	76	276654	23.33	ug/L	97
25) methylene chloride	7.851	84	123491	38.61	ug/L	87
26) methyl acetate	7.658	43	128822	36.06	ug/L	94
27) methyl tert butyl ether	8.244	73	270037	25.15	ug/L	98
28) trans-1,2-dichloroethene	8.265	96	106776	41.63	ug/L	85
29) hexane	8.625	57	150520	38.02	ug/L	96
30) di-isopropyl ether	8.876	45	410457	33.21	ug/L	78
31) ethyl tert-butyl ether	9.363	59	395104	35.41	ug/L	96
32) 2-butanone	9.583	72	81135	184.96	ug/L #	74
33) 1,1-dichloroethane	8.861	63	204800	39.53	ug/L	97
34) chloroprene	8.986	53	163260	36.30	ug/L	92
35) acrylonitrile	8.197	53	46686	27.80	ug/L	93
36) vinyl acetate	8.856	86	23185	58.95	ug/L #	65
37) ethyl acetate	9.619	45	25544	39.66	ug/L #	56
38) 2,2-dichloropropane	9.651	77	169495	33.79	ug/L	92
39) cis-1,2-dichloroethene	9.619	96	123634	43.48	ug/L	90
40) methyl acrylate	9.703	85	15842	34.62	ug/L #	77
41) propionitrile	9.682	54	298933	351.77	ug/L	99
42) bromochloromethane	9.933	128	62976	48.31	ug/L	87
43) tetrahydrofuran	9.990	42	50053	25.18	ug/L	88
44) chloroform	10.001	83	187090	38.42	ug/L	98
45) tert-butyl formate	10.064	59	122957	43.17	ug/L	93
47) methacrylonitrile	9.875	67	44160	30.18	ug/L	85
48) cyclohexane	10.383	84	180845	35.52	ug/L #	73

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.289	97	175098	35.62	ug/L	98
50) iso-butyl alcohol	10.451	43	107730	311.14	ug/L	97
51) 1,1-dichloropropene	10.466	75	148987	41.70	ug/L	97
52) carbon tetrachloride	10.503	117	151109	37.05	ug/L	98
53) tert-amyl alcohol	10.597	73	84059	176.50	ug/L	87
56) benzene	10.738	78	447048	42.53	ug/L	97
57) iso-octane	10.785	57	443668	34.20	ug/L	94
58) tert-amyl methyl ether	10.796	73	388390	37.11	ug/L	96
59) heptane	10.953	71	83989	40.14	ug/L	98
60) isopropyl acetate	10.670	87	30138	48.83	ug/L #	58
61) 1,2-dichloroethane	10.733	62	140384	37.55	ug/L	97
62) n-butyl alcohol	11.220	56	367750	1967.75	ug/L	93
63) ethyl acrylate	11.476	55	157908	42.87	ug/L	98
64) trichloroethene	11.471	95	103831	42.05	ug/L	89
65) 2-nitropropane	12.271	41	39904	30.00	ug/L #	64
66) methylcyclohexane	11.732	83	222589	38.05	ug/L	92
67) 2-chloroethyl vinyl ether	12.297	63	350795	261.62	ug/L	96
68) methyl methacrylate	11.753	100	22718	34.16	ug/L #	74
69) 1,2-dichloropropane	11.748	63	117800	41.15	ug/L	97
70) dibromomethane	11.894	93	71901	46.42	ug/L	88
71) bromodichloromethane	12.030	83	145131	43.25	ug/L	97
72) epichlorohydrin	12.412	57	88464	201.48	ug/L	97
73) cis-1,3-dichloropropene	12.532	75	174185	44.97	ug/L	92
74) 4-methyl-2-pentanone	12.647	58	271405	160.82	ug/L #	83
75) 3-methyl-1-butanol	12.647	55	240625	776.00	ug/L	93
78) toluene	12.940	92	249056	46.91	ug/L	97
79) trans-1,3-dichloropropene	13.129	75	145526	45.93	ug/L	97
80) ethyl methacrylate	13.149	69	102090	30.36	ug/L	90
81) 1,1,2-trichloroethane	13.364	83	78382	47.55	ug/L	94
82) 2-hexanone	13.573	58	217635	165.19	ug/L #	87
83) tetrachloroethene	13.578	166	102780	51.09	ug/L	96
84) 1,3-dichloropropane	13.568	76	149443	45.72	ug/L	99
85) butyl acetate	13.662	56	82616	40.27	ug/L	87
87) dibromochloromethane	13.850	129	102929	51.09	ug/L	100
88) 1,2-dibromoethane	14.023	107	94184	46.61	ug/L	99
89) n-butyl ether	14.488	57	465109	38.28	ug/L	95
90) chlorobenzene	14.551	112	252896	46.56	ug/L	93
91) 1,1,2-tetrachloroethane	14.614	131	120034	48.88	ug/L	98
92) ethylbenzene	14.624	91	434029	41.01	ug/L	97
93) m,p-xylene	14.745	106	336818	88.15	ug/L	92
94) o-xylene	15.210	106	187395	45.31	ug/L	93
95) styrene	15.215	104	261516	41.48	ug/L	96
96) butyl acrylate	15.017	55	209130	36.79	ug/L	96
97) bromoform	15.487	173	67736	46.80	ug/L	99
98) isopropylbenzene	15.602	105	513398	43.46	ug/L	97
99) cis-1,4-dichloro-2-butene	15.649	75	48942	40.85	ug/L	92
102) bromobenzene	16.031	156	100162	49.27	ug/L	86
103) 1,1,2,2-tetrachloroethane	15.906	83	150509	46.76	ug/L	98
104) trans-1,4-dichloro-2-b...	15.958	53	19785	26.62	ug/L	83
105) 1,2,3-trichloropropane	15.995	110	35267	45.39	ug/L	98
106) n-propylbenzene	16.063	91	520479	44.06	ug/L	96
107) 2-chlorotoluene	16.214	126	111453	51.16	ug/L #	85
108) 4-chlorotoluene	16.324	91	269152	41.97	ug/L	96
110) 1,3,5-trimethylbenzene	16.230	105	423285	48.45	ug/L	98
111) tert-butylbenzene	16.628	134	91390	54.55	ug/L #	91
112) 1,2,4-trimethylbenzene	16.669	105	403877	46.51	ug/L	96
113) sec-butylbenzene	16.868	105	570200	48.82	ug/L	98
114) 1,3-dichlorobenzene	17.056	146	193371	47.16	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240809.D
 Acq On : 3 Apr 2018 9:15 pm
 Operator : JessicaP
 Sample : icc9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
 Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Mon Mar 19 16:31:00 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.004	119	461578	48.15	ug/L	96
116) 1,4-dichlorobenzene	17.151	146	194208	47.23	ug/L	97
117) 1,2-dichlorobenzene	17.585	146	208414	47.49	ug/L	99
119) n-butylbenzene	17.464	92	223007	43.45	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.432	157	39540	43.91	ug/L	91
122) 1,3,5-trichlorobenzene	18.652	180	199437	49.37	ug/L	98
123) 2-ethylhexyl acrylate	19.363	70	30207	9.14	ug/L	89
124) 1,2,4-trichlorobenzene	19.373	180	172327	44.77	ug/L	98
125) hexachlorobutadiene	19.525	225	77194	44.87	ug/L	96
126) naphthalene	19.698	128	434761	36.03	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	158568	38.73	ug/L	97
128) hexachloroethane	17.893	201	59629	42.10	ug/L	95
129) 2-methylnaphthalene	20.984	142	83961	10.48	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

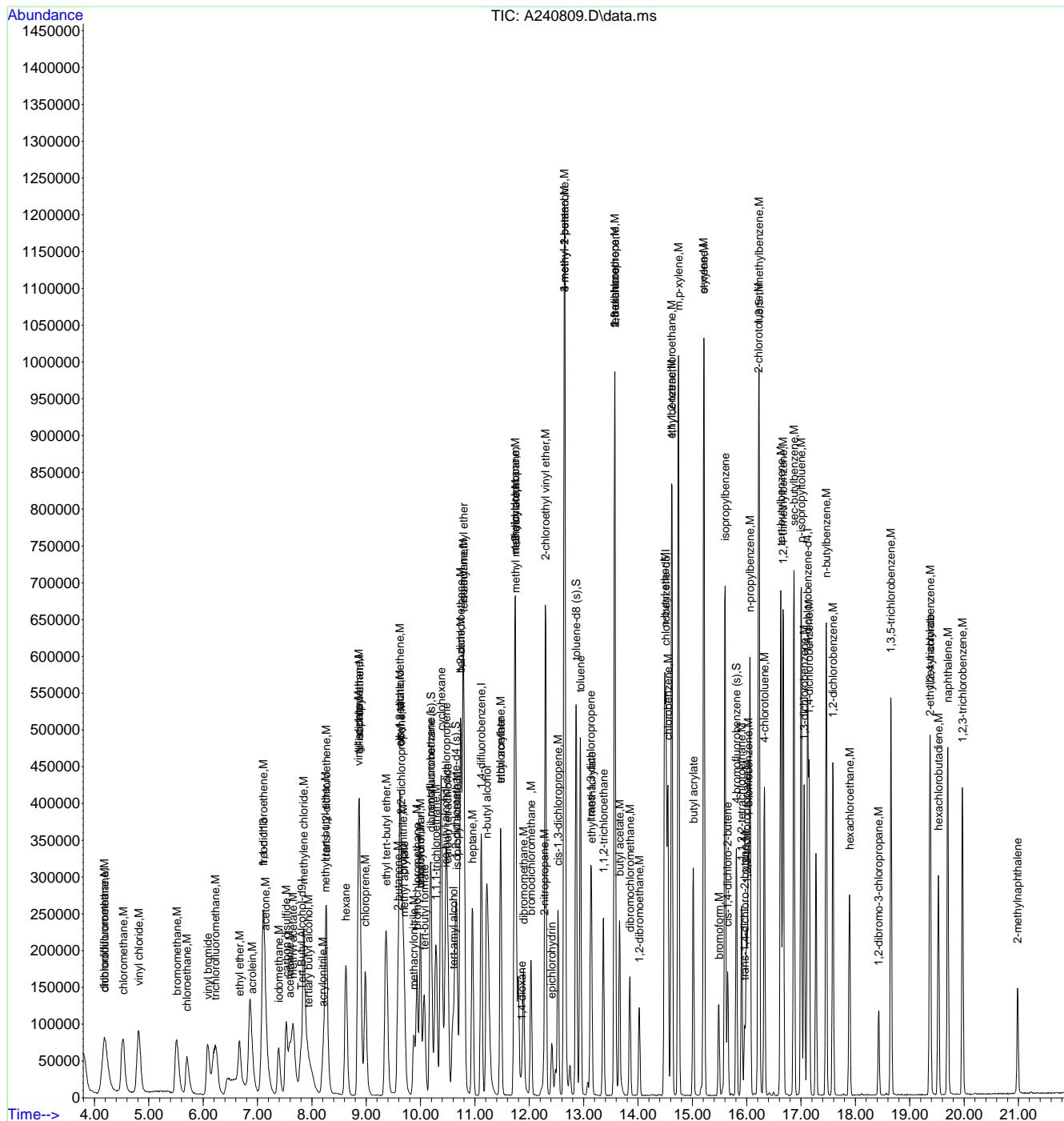
7.6.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240809.D
Acq On : 3 Apr 2018 9:15 pm
Operator : JessicaP
Sample : icc9165-50
Misc : MS25128,VA9165,5,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 05 10:00:14 2018
Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Mon Mar 19 16:31:00 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.816	65	365289	500.00	ug/L	0.00
5) pentafluorobenzene	10.185	168	261659	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.121	114	410003	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	355943	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	166016	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.201	113	129534	49.57	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	99.14%		
55) 1,2-dichloroethane-d4 (s)	10.645	65	141899	48.56	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery =	97.12%		
77) toluene-d8 (s)	12.863	98	457261	48.06	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	96.12%		
101) 4-bromofluorobenzene (s)	15.813	95	144167	53.20	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery =	106.40%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.973	59	324075	548.84	ug/L	97
4) 1,4-dioxane	11.859	88	104372	3021.60	ug/L	99
6) chlorodifluoromethane	4.191	51	386345	98.01	ug/L	98
7) dichlorodifluoromethane	4.191	85	419374	98.89	ug/L	100
10) chloromethane	4.547	50	477329	154.05	ug/L	98
11) vinyl chloride	4.840	62	514402	100.23	ug/L	97
13) bromomethane	5.525	94	277886	92.49	ug/L	98
14) chloroethane	5.703	64	222713	80.13	ug/L	99
15) vinyl bromide	6.100	106	269236	103.93	ug/L	100
16) trichlorofluoromethane	6.242	101	408519	102.02	ug/L	97
17) ethyl ether	6.676	74	92959	102.47	ug/L	99
18) acrolein	6.916	56	73383	102.00	ug/L	86
19) freon 113	7.115	151	200807	106.77	ug/L	99
20) 1,1-dichloroethene	7.115	96	242533	102.24	ug/L	98
21) acetone	7.152	58	160872	412.00	ug/L	86
22) acetonitrile	7.607	41	591673	842.97	ug/L	99
23) iodomethane	7.392	142	334774	95.14	ug/L	96
24) carbon disulfide	7.539	76	628262	92.55	ug/L	99
25) methylene chloride	7.858	84	271279	93.43	ug/L	98
26) methyl acetate	7.664	43	275085	95.70	ug/L	100
27) methyl tert butyl ether	8.250	73	561579	95.62	ug/L	98
28) trans-1,2-dichloroethene	8.271	96	235035	96.69	ug/L	96
29) hexane	8.632	57	322175	90.38	ug/L	99
30) di-isopropyl ether	8.883	45	860970	94.13	ug/L	96
31) ethyl tert-butyl ether	9.364	59	841363	100.34	ug/L	99
32) 2-butanone	9.594	72	173501	448.35	ug/L #	87
33) 1,1-dichloroethane	8.862	63	440794	89.41	ug/L	99
34) chloroprene	8.988	53	361659	99.03	ug/L	96
35) acrylonitrile	8.198	53	99285	109.00	ug/L	97
36) vinyl acetate	8.862	86	48802	117.86	ug/L #	90
37) ethyl acetate	9.626	45	54226	109.23	ug/L	98
38) 2,2-dichloropropane	9.652	77	355987	83.00	ug/L	96
39) cis-1,2-dichloroethene	9.626	96	269469	96.46	ug/L	99
40) methyl acrylate	9.709	85	35607	115.91	ug/L #	84
41) propionitrile	9.683	54	619555	990.00	ug/L	99
42) bromochloromethane	9.939	128	134565	97.26	ug/L	99
43) tetrahydrofuran	9.997	42	104249	98.68	ug/L	99
44) chloroform	10.002	83	405089	95.52	ug/L	99
45) tert-butyl formate	10.070	59	252304	95.41	ug/L	99
47) methacrylonitrile	9.887	67	96017	104.59	ug/L	95
48) cyclohexane	10.384	84	386279	95.91	ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.290	97	374355	95.38	ug/L	99
50) iso-butyl alcohol	10.452	43	244814	921.99	ug/L	99
51) 1,1-dichloropropene	10.473	75	324429	99.18	ug/L	99
52) carbon tetrachloride	10.504	117	326367	96.92	ug/L	100
53) tert-amyl alcohol	10.598	73	173748	518.45	ug/L	95
56) benzene	10.745	78	970447	94.35	ug/L	98
57) iso-octane	10.787	57	1021061	100.91	ug/L	99
58) tert-amyl methyl ether	10.797	73	829838	94.27	ug/L	99
59) heptane	10.954	71	181368	93.73	ug/L	98
60) isopropyl acetate	10.672	87	64363	87.08	ug/L #	92
61) 1,2-dichloroethane	10.734	62	304682	90.29	ug/L	98
62) n-butyl alcohol	11.226	56	783902	4930.59	ug/L	99
63) ethyl acrylate	11.477	55	353148	98.05	ug/L	99
64) trichloroethene	11.472	95	233249	100.37	ug/L	99
65) 2-nitropropane	12.267	41	84263	84.65	ug/L #	73
66) methylcyclohexane	11.733	83	484616	93.25	ug/L	99
67) 2-chloroethyl vinyl ether	12.298	63	770222	504.89	ug/L	99
68) methyl methacrylate	11.759	100	52811	127.11	ug/L #	82
69) 1,2-dichloropropane	11.749	63	259495	90.47	ug/L	97
70) dibromomethane	11.895	93	155813	99.64	ug/L	99
71) bromodichloromethane	12.031	83	316631	98.93	ug/L	99
72) epichlorohydrin	12.418	57	190013	461.39	ug/L	99
73) cis-1,3-dichloropropene	12.528	75	389157	101.53	ug/L	99
74) 4-methyl-2-pentanone	12.654	58	578356	391.09	ug/L	96
75) 3-methyl-1-butanol	12.649	55	505649	1841.03	ug/L	99
78) toluene	12.941	92	562623	94.96	ug/L	97
79) trans-1,3-dichloropropene	13.130	75	323111	96.75	ug/L	97
80) ethyl methacrylate	13.151	69	225200	95.58	ug/L	97
81) 1,1,2-trichloroethane	13.365	83	172417	95.45	ug/L	96
82) 2-hexanone	13.574	58	481364	374.71	ug/L	98
83) tetrachloroethene	13.580	166	231440	97.73	ug/L	98
84) 1,3-dichloropropane	13.569	76	330966	94.42	ug/L	99
85) butyl acetate	13.658	56	181814	53.54	ug/L	98
87) dibromochloromethane	13.852	129	227796	91.56	ug/L	98
88) 1,2-dibromoethane	14.024	107	212571	99.67	ug/L	98
89) n-butyl ether	14.490	57	1004771	88.93	ug/L	100
90) chlorobenzene	14.552	112	575496	98.88	ug/L	98
91) 1,1,2-tetrachloroethane	14.615	131	259673	92.25	ug/L	99
92) ethylbenzene	14.626	91	986825	95.24	ug/L	100
93) m,p-xylene	14.746	106	763870	194.90	ug/L	98
94) o-xylene	15.211	106	417605	95.10	ug/L	99
95) styrene	15.217	104	602969	93.85	ug/L	99
96) butyl acrylate	15.018	55	444063	80.84	ug/L	99
97) bromoform	15.489	173	149923	96.34	ug/L	97
98) isopropylbenzene	15.604	105	1107917	93.62	ug/L	99
99) cis-1,4-dichloro-2-butene	15.651	75	105386	86.27	ug/L	99
102) bromobenzene	16.027	156	232596	105.44	ug/L	95
103) 1,1,2,2-tetrachloroethane	15.907	83	321230	100.48	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	41075	89.05	ug/L	99
105) 1,2,3-trichloropropane	15.996	110	78792	107.58	ug/L	98
106) n-propylbenzene	16.064	91	1145939	103.04	ug/L	99
107) 2-chlorotoluene	16.216	126	250426	108.34	ug/L	97
108) 4-chlorotoluene	16.325	91	603375	101.09	ug/L	97
110) 1,3,5-trimethylbenzene	16.231	105	918063	105.71	ug/L	98
111) tert-butylbenzene	16.629	134	204460	118.49	ug/L	93
112) 1,2,4-trimethylbenzene	16.671	105	895946	105.97	ug/L	100
113) sec-butylbenzene	16.869	105	1247585	109.24	ug/L	99
114) 1,3-dichlorobenzene	17.058	146	413125	99.26	ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240810.D
 Acq On : 3 Apr 2018 9:44 pm
 Operator : JessicaP
 Sample : ic9165-100
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

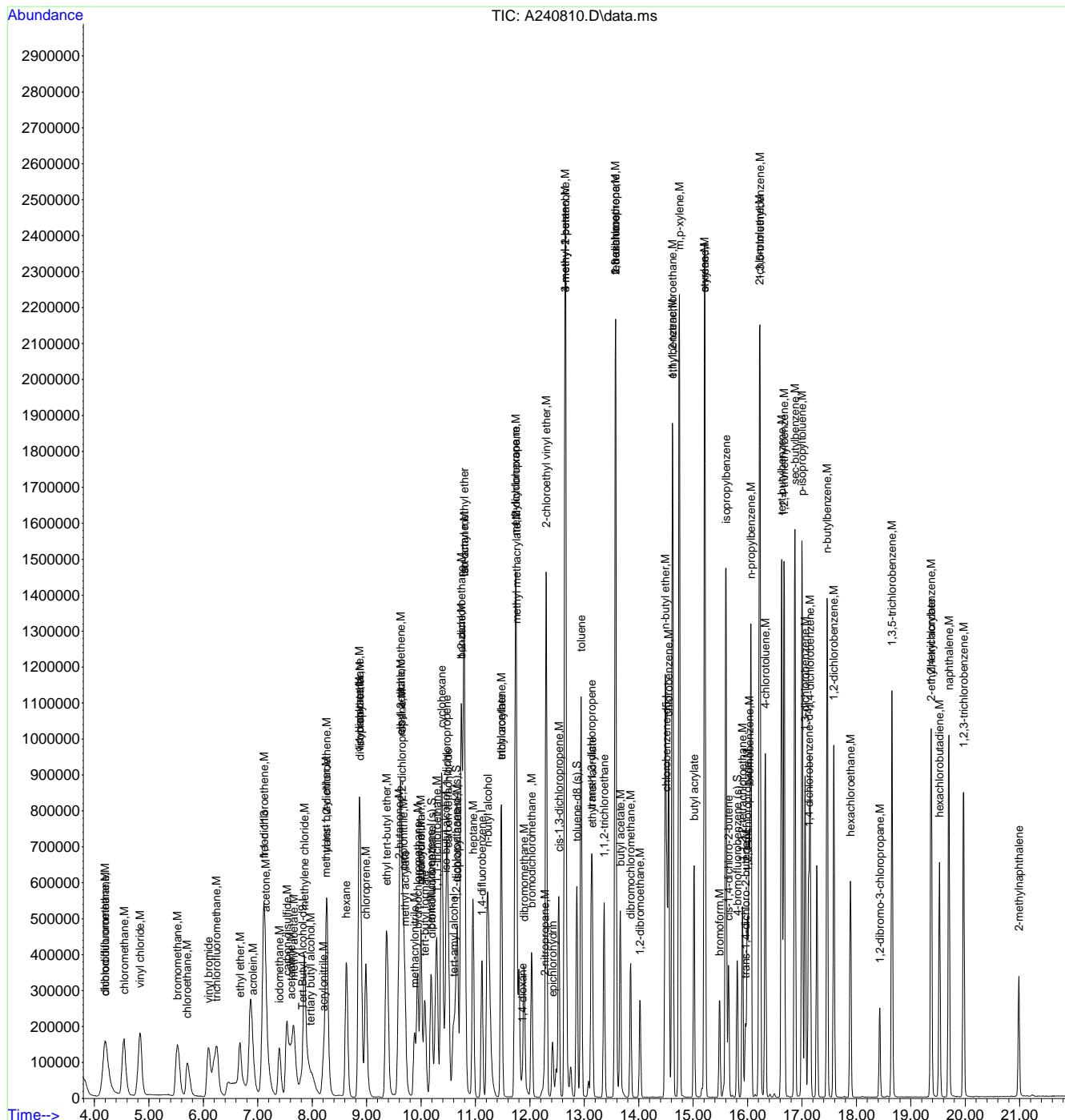
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	1013267	106.91	ug/L	99
116) 1,4-dichlorobenzene	17.147	146	415624	96.94	ug/L	99
117) 1,2-dichlorobenzene	17.586	146	442296	96.15	ug/L	99
119) n-butylbenzene	17.460	92	484211	98.47	ug/L	95
121) 1,2-dibromo-3-chloropr...	18.428	157	82306	95.39	ug/L	94
122) 1,3,5-trichlorobenzene	18.653	180	411267	95.52	ug/L	98
123) 2-ethylhexyl acrylate	19.364	70	62287	18.82	ug/L	98
124) 1,2,4-trichlorobenzene	19.375	180	351917	94.21	ug/L	97
125) hexachlorobutadiene	19.526	225	167781	105.74	ug/L	97
126) naphthalene	19.699	128	900802	86.50	ug/L	99
127) 1,2,3-trichlorobenzene	19.971	180	329812	96.62	ug/L	97
128) hexachloroethane	17.889	201	131071	119.77	ug/L	99
129) 2-methylnaphthalene	20.985	142	193990	48.15	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240810.D
Acq On : 3 Apr 2018 9:44 pm
Operator : JessicaP
Sample : ic9165-100
Misc : MS25128,VA9165,5,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 05 11:20:15 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 10:00:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.815	65	354074	500.00	ug/L	0.00
5) pentafluorobenzene	10.179	168	252317	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.115	114	408092	50.00	ug/L	0.00
76) chlorobenzene-d5	14.514	117	378672	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.119	152	176036	50.00	ug/L	0.00

System Monitoring Compounds						
46) dibromofluoromethane (s)	10.200	113	127320	50.53	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	101.06%		
55) 1,2-dichloroethane-d4 (s)	10.639	65	140021	48.14	ug/L	0.00
Spiked Amount 50.000	Range 81 - 124		Recovery =	96.28%		
77) toluene-d8 (s)	12.862	98	470692	46.50	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	93.00%		
101) 4-bromofluorobenzene (s)	15.812	95	154378	53.72	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery =	107.44%		

Target Compounds						Qvalue
3) tertiary butyl alcohol	7.945	59	606868	1060.32	ug/L	97
4) 1,4-dioxane	11.858	88	201664	6023.15	ug/L	98
6) chlorodifluoromethane	4.190	51	749759	197.25	ug/L	98
7) dichlorodifluoromethane	4.190	85	813510	198.94	ug/L	98
10) chloromethane	4.541	50	950027	317.95	ug/L	98
11) vinyl chloride	4.833	62	1009386	203.95	ug/L	99
13) bromomethane	5.513	94	521044	179.83	ug/L	99
15) vinyl bromide	6.083	106	519183	207.84	ug/L	100
16) trichlorofluoromethane	6.230	101	786503	203.69	ug/L	97
17) ethyl ether	6.669	74	167763	191.78	ug/L	97
18) acrolein	6.910	56	138240	199.26	ug/L	96
19) freon 113	7.098	151	379979	209.53	ug/L	99
20) 1,1-dichloroethene	7.103	96	442141	193.29	ug/L	97
21) acetone	7.150	58	294457	782.04	ug/L	89
22) acetonitrile	7.605	41	1103868	1630.93	ug/L	99
23) iodomethane	7.386	142	610629	179.95	ug/L	97
24) carbon disulfide	7.527	76	1143305	174.66	ug/L	100
25) methylene chloride	7.851	84	500932	178.92	ug/L	97
26) methyl acetate	7.658	43	505756	182.45	ug/L	99
27) methyl tert butyl ether	8.254	73	1068358	188.64	ug/L	97
28) trans-1,2-dichloroethene	8.264	96	429168	183.09	ug/L	97
29) hexane	8.625	57	596673	173.59	ug/L	99
30) di-isopropyl ether	8.882	45	1603505	181.79	ug/L	93
31) ethyl tert-butyl ether	9.368	59	1598507	197.70	ug/L	99
32) 2-butanone	9.588	72	337109	903.40	ug/L	99
33) 1,1-dichloroethane	8.855	63	804534	169.23	ug/L	100
34) chloroprene	8.981	53	664789	188.78	ug/L	97
35) acrylonitrile	8.191	53	182884	208.22	ug/L	97
36) vinyl acetate	8.855	86	93041	233.01	ug/L #	81
37) ethyl acetate	9.619	45	103188	215.55	ug/L	97
38) 2,2-dichloropropane	9.645	77	666867	161.24	ug/L	97
39) cis-1,2-dichloroethene	9.619	96	501373	186.12	ug/L	99
40) methyl acrylate	9.698	85	67482	227.81	ug/L	97
41) propionitrile	9.687	54	1171308	1940.96	ug/L	89
42) bromochloromethane	9.933	128	252955	189.60	ug/L	97
43) tetrahydrofuran	9.996	42	197036	193.42	ug/L	98
44) chloroform	9.996	83	747139	182.70	ug/L	99
45) tert-butyl formate	10.069	59	476935	187.03	ug/L	99
47) methacrylonitrile	9.881	67	180821	204.26	ug/L	100
48) cyclohexane	10.383	84	737141	189.80	ug/L	98
49) 1,1,1-trichloroethane	10.289	97	708656	187.25	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
50) iso-butyl alcohol	10.451	43	466337	1821.29	ug/L	97
51) 1,1-dichloropropene	10.466	75	612610	194.21	ug/L	99
52) carbon tetrachloride	10.503	117	61909	190.91	ug/L	100
53) tert-amyl alcohol	10.608	73	332011	1027.38	ug/L	93
56) benzene	10.738	78	1828065	178.56	ug/L	98
57) iso-octane	10.785	57	1963803	194.99	ug/L	98
58) tert-amyl methyl ether	10.796	73	1571559	179.36	ug/L	98
59) heptane	10.953	71	354924	184.28	ug/L	98
60) isopropyl acetate	10.670	87	123008	167.20	ug/L	99
61) 1,2-dichloroethane	10.733	62	580787	172.93	ug/L	99
62) n-butyl alcohol	11.225	56	1530005	9668.49	ug/L	99
63) ethyl acrylate	11.481	55	687032	191.64	ug/L	99
64) trichloroethene	11.471	95	447668	193.54	ug/L	97
65) 2-nitropropane	12.271	41	161855	163.37	ug/L	98
66) methylcyclohexane	11.732	83	915065	176.90	ug/L	99
67) 2-chloroethyl vinyl ether	12.302	63	1505568	991.54	ug/L	97
68) methyl methacrylate	11.758	100	102023	246.71	ug/L #	80
69) 1,2-dichloropropane	11.748	63	492966	172.67	ug/L	96
70) dibromomethane	11.894	93	298603	191.85	ug/L	99
71) bromodichloromethane	12.035	83	609719	191.40	ug/L	97
72) epichlorohydrin	12.417	57	370337	903.46	ug/L	98
73) cis-1,3-dichloropropene	12.532	75	762590	199.88	ug/L	99
74) 4-methyl-2-pentanone	12.653	58	1085545	737.50	ug/L	91
75) 3-methyl-1-butanol	12.653	55	953673	3488.51	ug/L	99
78) toluene	12.940	92	1100169	174.54	ug/L	95
79) trans-1,3-dichloropropene	13.128	75	636051	179.02	ug/L	96
80) ethyl methacrylate	13.149	69	447096	178.36	ug/L	98
81) 1,1,2-trichloroethane	13.364	83	345072	179.56	ug/L	97
82) 2-hexanone	13.573	58	950405	695.43	ug/L	95
83) tetrachloroethene	13.584	166	457646	181.66	ug/L	97
84) 1,3-dichloropropane	13.568	76	661279	177.32	ug/L	98
85) butyl acetate	13.662	56	359714	99.57	ug/L	96
87) dibromochloromethane	13.850	129	458242	173.14	ug/L	99
88) 1,2-dibromoethane	14.023	107	428032	188.66	ug/L	98
89) n-butyl ether	14.488	57	1924760	160.13	ug/L	99
90) chlorobenzene	14.551	112	1171432	189.20	ug/L	97
91) 1,1,1,2-tetrachloroethane	14.614	131	511107	170.68	ug/L	99
92) ethylbenzene	14.624	91	1941975	176.18	ug/L	97
93) m,p-xylene	14.745	106	1529478	366.82	ug/L	92
94) o-xylene	15.210	106	823715	176.32	ug/L	98
95) styrene	15.215	104	1216075	177.91	ug/L	99
96) butyl acrylate	15.017	55	859748	147.12	ug/L	98
97) bromoform	15.487	173	306091	184.88	ug/L	97
98) isopropylbenzene	15.602	105	2135443	169.61	ug/L	97
99) cis-1,4-dichloro-2-butene	15.649	75	209200	160.97	ug/L	97
102) bromobenzene	16.031	156	479460	204.97	ug/L	99
103) 1,1,2,2-tetrachloroethane	15.906	83	635367	187.42	ug/L	100
104) trans-1,4-dichloro-2-b...	15.963	53	80145	163.86	ug/L	90
105) 1,2,3-trichloropropane	15.995	110	155630	200.40	ug/L	97
106) n-propylbenzene	16.063	91	2243608	190.26	ug/L	97
107) 2-chlorotoluene	16.214	126	514652	209.97	ug/L	91
108) 4-chlorotoluene	16.324	91	1240196	195.95	ug/L	98
110) 1,3,5-trimethylbenzene	16.230	105	1833274	199.08	ug/L	97
111) tert-butylbenzene	16.627	134	407613	222.78	ug/L	92
112) 1,2,4-trimethylbenzene	16.675	105	1753183	195.56	ug/L	96
113) sec-butylbenzene	16.868	105	2389642	197.32	ug/L	96
114) 1,3-dichlorobenzene	17.062	146	826037	187.16	ug/L	97
115) p-isopropyltoluene	17.004	119	1976399	196.66	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration

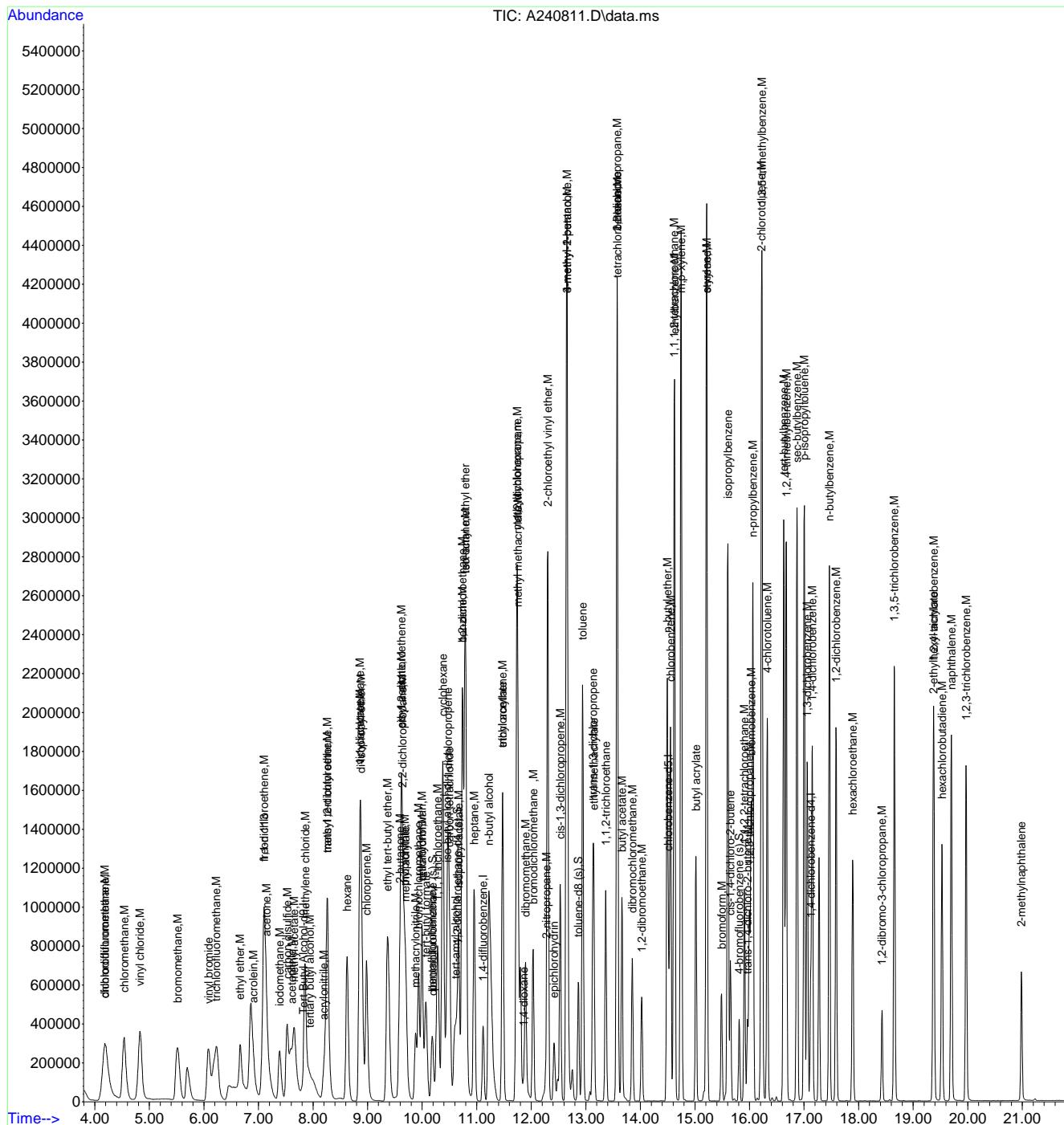
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
116) 1,4-dichlorobenzene	17.150	146	832045	183.02	ug/L	98
117) 1,2-dichlorobenzene	17.585	146	878687	180.15	ug/L	98
119) n-butylbenzene	17.464	92	957017	183.54	ug/L	93
121) 1,2-dibromo-3-chloropr...	18.427	157	158940	173.72	ug/L	97
122) 1,3,5-trichlorobenzene	18.657	180	815912	178.71	ug/L	99
123) 2-ethylhexyl acrylate	19.363	70	124777	35.56	ug/L	98
124) 1,2,4-trichlorobenzene	19.378	180	695039	175.47	ug/L	96
125) hexachlorobutadiene	19.525	225	346694	206.06	ug/L	98
126) naphthalene	19.698	128	1723988	156.12	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	650544	179.72	ug/L	96
128) hexachloroethane	17.893	201	266932	230.04	ug/L	99
129) 2-methylnaphthalene	20.984	142	387495	90.70	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240811.D
 Acq On : 3 Apr 2018 10:13 pm
 Operator : JessicaP
 Sample : ic9165-200
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 05 12:22:45 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 10:00:34 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.810	65	380430	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	265452	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.116	114	407460	50.00	ug/L	0.00
76) chlorobenzene-d5	14.515	117	321567	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.120	152	159292	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) dibromofluoromethane (s)	10.206	113	132572	50.11	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 100.22%			
55) 1,2-dichloroethane-d4 (s)	10.640	65	143763	49.53	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery = 99.06%			
77) toluene-d8 (s)	12.863	98	436189	50.76	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.52%			
101) 4-bromofluorobenzene (s)	15.807	95	132036	50.89	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery = 101.78%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
3) tertiary butyl alcohol	7.967	59	171935	255.08	ug/L	96
4) 1,4-dioxane	11.858	88	53268	1256.47	ug/L	100
6) chlorodifluoromethane	4.202	51	189181	46.25	ug/L	97
7) dichlorodifluoromethane	4.202	85	201790	45.05	ug/L	95
10) chloromethane	4.536	50	223584	43.76	ug/L	99
11) vinyl chloride	4.834	62	230247	43.76	ug/L	98
13) bromomethane	5.520	94	136699	46.15	ug/L	99
14) chloroethane	5.708	64	113299	48.19	ug/L	96
15) vinyl bromide	6.095	106	141268	52.55	ug/L	100
16) trichlorofluoromethane	6.241	101	192654	46.01	ug/L	95
17) ethyl ether	6.675	74	69348	50.72	ug/L	94
18) acrolein	6.911	56	50291	63.31	ug/L	97
19) freon 113	7.115	151	119862	57.62	ug/L	98
20) 1,1-dichloroethene	7.115	96	112517	45.70	ug/L	99
21) acetone	7.162	58	72551	183.15	ug/L	91
22) acetonitrile	7.674	41	534707	842.27	ug/L #	51
23) iodomethane	7.402	142	232398	46.78	ug/L	95
24) carbon disulfide	7.533	76	446451	46.96	ug/L	99
25) methylene chloride	7.857	84	137963	48.57	ug/L	98
26) methyl acetate	7.664	43	135708	46.15	ug/L	99
27) methyl tert butyl ether	8.250	73	830425	97.56	ug/L	92
28) trans-1,2-dichloroethene	8.265	96	115821	46.97	ug/L	98
29) hexane	8.631	57	141251	39.89	ug/L	99
30) di-isopropyl ether	8.883	45	442091	46.82	ug/L	98
31) ethyl tert-butyl ether	9.364	59	424281	49.65	ug/L	97
32) 2-butanone	9.594	72	84646	199.76	ug/L	90
33) 1,1-dichloroethane	8.862	63	221933	45.65	ug/L	98
34) chloroprene	8.987	53	184451	49.46	ug/L	98
35) acrylonitrile	8.203	53	77675	53.45	ug/L	97
36) vinyl acetate	8.862	86	25804	52.53	ug/L	95
37) ethyl acetate	9.620	45	28657	53.52	ug/L #	83
38) 2,2-dichloropropane	9.657	77	174886	41.97	ug/L	96
39) cis-1,2-dichloroethene	9.625	96	137760	48.61	ug/L	99
40) methyl acrylate	9.698	85	23493	47.65	ug/L	99
41) propionitrile	9.683	54	325388	358.89	ug/L	84
42) bromochloromethane	9.939	128	68207	44.05	ug/L	97
43) tetrahydrofuran	9.991	42	71499	44.86	ug/L	95
44) chloroform	10.002	83	206315	46.81	ug/L	99
45) tert-butyl formate	10.070	59	113392	41.81	ug/L	99
47) methacrylonitrile	9.881	67	66501	49.35	ug/L	97
48) cyclohexane	10.378	84	249768	61.13	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 1,1,1-trichloroethane	10.289	97	181875	45.68	ug/L	98
50) iso-butyl alcohol	10.446	43	122973	494.35	ug/L	96
51) 1,1-dichloropropene	10.472	75	159917	48.19	ug/L	98
52) carbon tetrachloride	10.509	117	160156	46.88	ug/L	99
53) tert-amyl alcohol	10.603	73	91701	254.26	ug/L	95
56) benzene	10.739	78	479528	46.91	ug/L	100
57) iso-octane	10.786	57	478471	47.58	ug/L	98
58) tert-amyl methyl ether	10.797	73	417820	46.96	ug/L	99
59) heptane	10.954	71	97881	50.90	ug/L	96
60) isopropyl acetate	10.666	87	31834	50.33	ug/L	95
61) 1,2-dichloroethane	10.734	62	152006	46.94	ug/L	96
62) n-butyl alcohol	11.220	56	393781	2492.26	ug/L	99
63) ethyl acrylate	11.477	55	167626	47.77	ug/L	99
64) trichloroethene	11.471	95	112217	48.61	ug/L	98
65) 2-nitropropane	12.266	41	54074	43.62	ug/L	# 70
66) methylcyclohexane	11.738	83	231422	44.81	ug/L	99
67) 2-chloroethyl vinyl ether	12.298	63	391454	258.20	ug/L	99
68) methyl methacrylate	11.754	100	34041	48.74	ug/L	# 77
69) 1,2-dichloropropane	11.743	63	125809	46.17	ug/L	100
70) dibromomethane	11.895	93	78262	50.36	ug/L	100
71) bromodichloromethane	12.031	83	153203	48.41	ug/L	99
72) epichlorohydrin	12.418	57	90313	233.79	ug/L	99
73) cis-1,3-dichloropropene	12.528	75	183900	48.28	ug/L	99
74) 4-methyl-2-pentanone	12.648	58	286409	195.59	ug/L	100
75) 3-methyl-1-butanol	12.648	55	258583	979.22	ug/L	99
78) toluene	12.941	92	266833	49.10	ug/L	98
79) trans-1,3-dichloropropene	13.129	75	142178	47.12	ug/L	97
80) ethyl methacrylate	13.145	69	144570	47.43	ug/L	98
81) 1,1,2-trichloroethane	13.359	83	82458	50.53	ug/L	99
82) 2-hexanone	13.569	58	222065	189.94	ug/L	99
83) tetrachloroethene	13.579	166	122224	57.13	ug/L	98
84) 1,3-dichloropropane	13.569	76	157452	49.72	ug/L	98
85) butyl acetate	13.663	56	88434	53.43	ug/L	99
87) dibromochloromethane	13.851	129	108995	50.03	ug/L	98
88) 1,2-dibromoethane	14.024	107	98666	51.21	ug/L	96
89) n-butyl ether	14.489	57	459694	46.21	ug/L	100
90) chlorobenzene	14.547	112	252415	47.89	ug/L	99
91) 1,1,2-tetrachloroethane	14.615	131	125907	49.51	ug/L	97
92) ethylbenzene	14.625	91	446392	46.84	ug/L	99
93) m,p-xylene	14.745	106	343144	95.05	ug/L	98
94) o-xylene	15.211	106	194196	49.50	ug/L	99
95) styrene	15.216	104	269941	46.34	ug/L	99
96) butyl acrylate	15.017	55	219345	47.56	ug/L	99
97) bromoform	15.483	173	72813	51.79	ug/L	99
98) isopropylbenzene	15.598	105	531351	49.70	ug/L	100
99) cis-1,4-dichloro-2-butene	15.650	75	50097	46.97	ug/L	97
102) bromobenzene	16.027	156	104549	49.39	ug/L	92
103) 1,1,2,2-tetrachloroethane	15.907	83	155068	50.55	ug/L	99
104) trans-1,4-dichloro-2-b...	15.959	53	37055	62.44	ug/L	96
105) 1,2,3-trichloropropane	15.995	110	38171	52.30	ug/L	99
106) n-propylbenzene	16.058	91	537220	49.48	ug/L	99
107) 2-chlorotoluene	16.215	126	112150	50.56	ug/L	95
108) 4-chlorotoluene	16.325	91	289073	50.47	ug/L	99
110) 1,3,5-trimethylbenzene	16.231	105	430074	50.96	ug/L	98
111) tert-butylbenzene	16.628	134	96047	55.80	ug/L	97
112) 1,2,4-trimethylbenzene	16.670	105	425804	51.72	ug/L	99
113) sec-butylbenzene	16.869	105	594663	54.05	ug/L	99
114) 1,3-dichlorobenzene	17.057	146	200814	49.61	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240814.D
 Acq On : 3 Apr 2018 11:40 pm
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

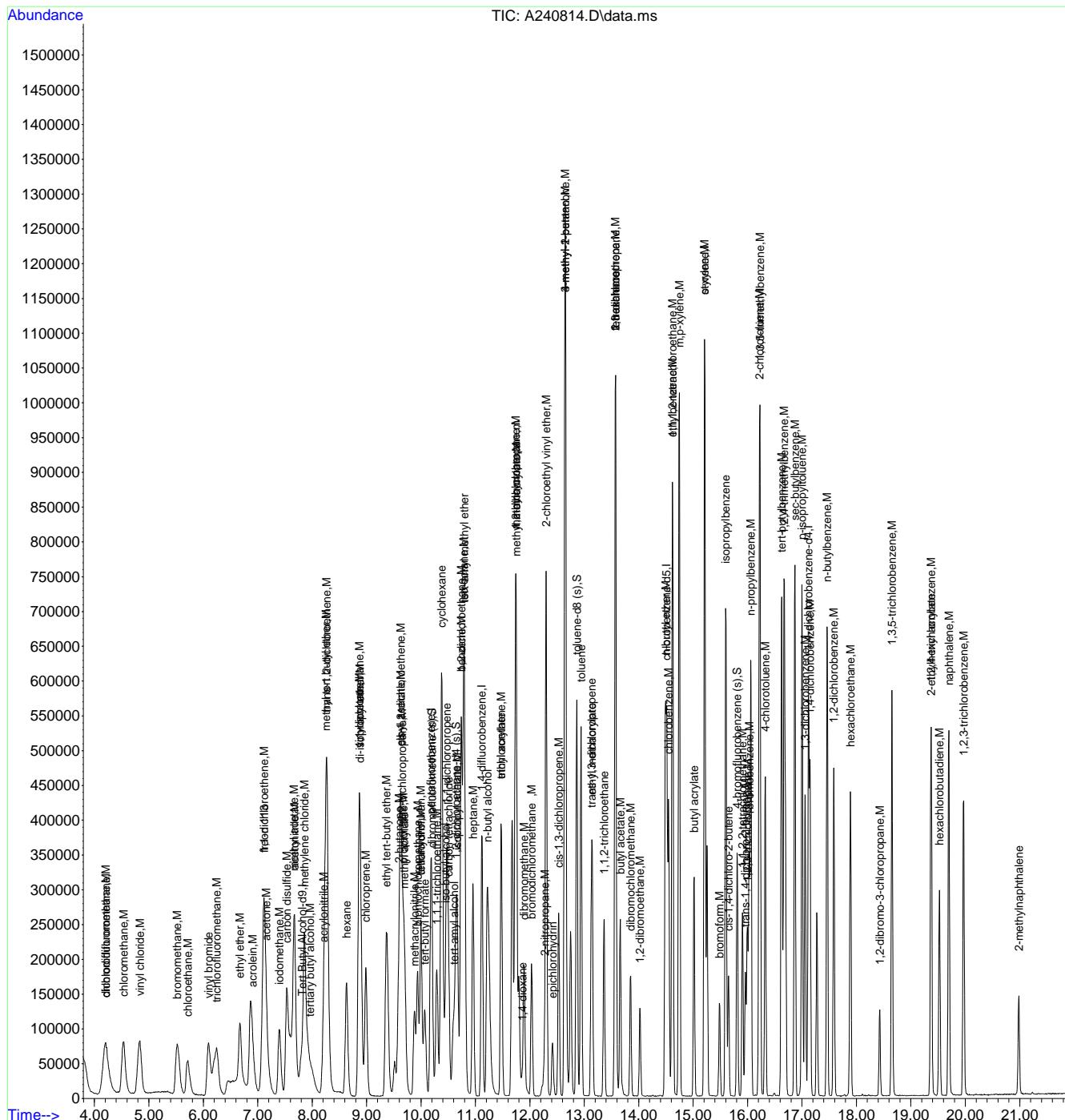
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
115) p-isopropyltoluene	17.000	119	477371	52.40	ug/L	99
116) 1,4-dichlorobenzene	17.151	146	201296	48.93	ug/L	100
117) 1,2-dichlorobenzene	17.585	146	215829	48.72	ug/L	99
119) n-butylbenzene	17.460	92	233622	48.80	ug/L	96
121) 1,2-dibromo-3-chloropr...	18.427	157	41307	49.89	ug/L	97
122) 1,3,5-trichlorobenzene	18.652	180	205551	49.03	ug/L	99
123) 2-ethylhexyl acrylate	19.364	70	31959	10.06	ug/L	93
124) 1,2,4-trichlorobenzene	19.374	180	181919	50.05	ug/L	99
125) hexachlorobutadiene	19.526	225	77284	50.76	ug/L	96
126) naphthalene	19.698	128	471102	51.10	ug/L	99
127) 1,2,3-trichlorobenzene	19.970	180	164508	50.08	ug/L	94
128) hexachloroethane	17.889	201	91577	57.54	ug/L	99
129) 2-methylnaphthalene	20.985	142	83977	23.24	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
Data File : A240814.D
Acq On : 3 Apr 2018 11:40 pm
Operator : JessicaP
Sample : icv9165-50
Misc : MS25128,VA9165,5,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 05 12:19:43 2018
Quant Method : C:\msdchem\1\METHODS\MA9165.M
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Thu Apr 05 12:19:04 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240815.D
 Acq On : 4 Apr 2018 12:09 am
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 12:22:06 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration

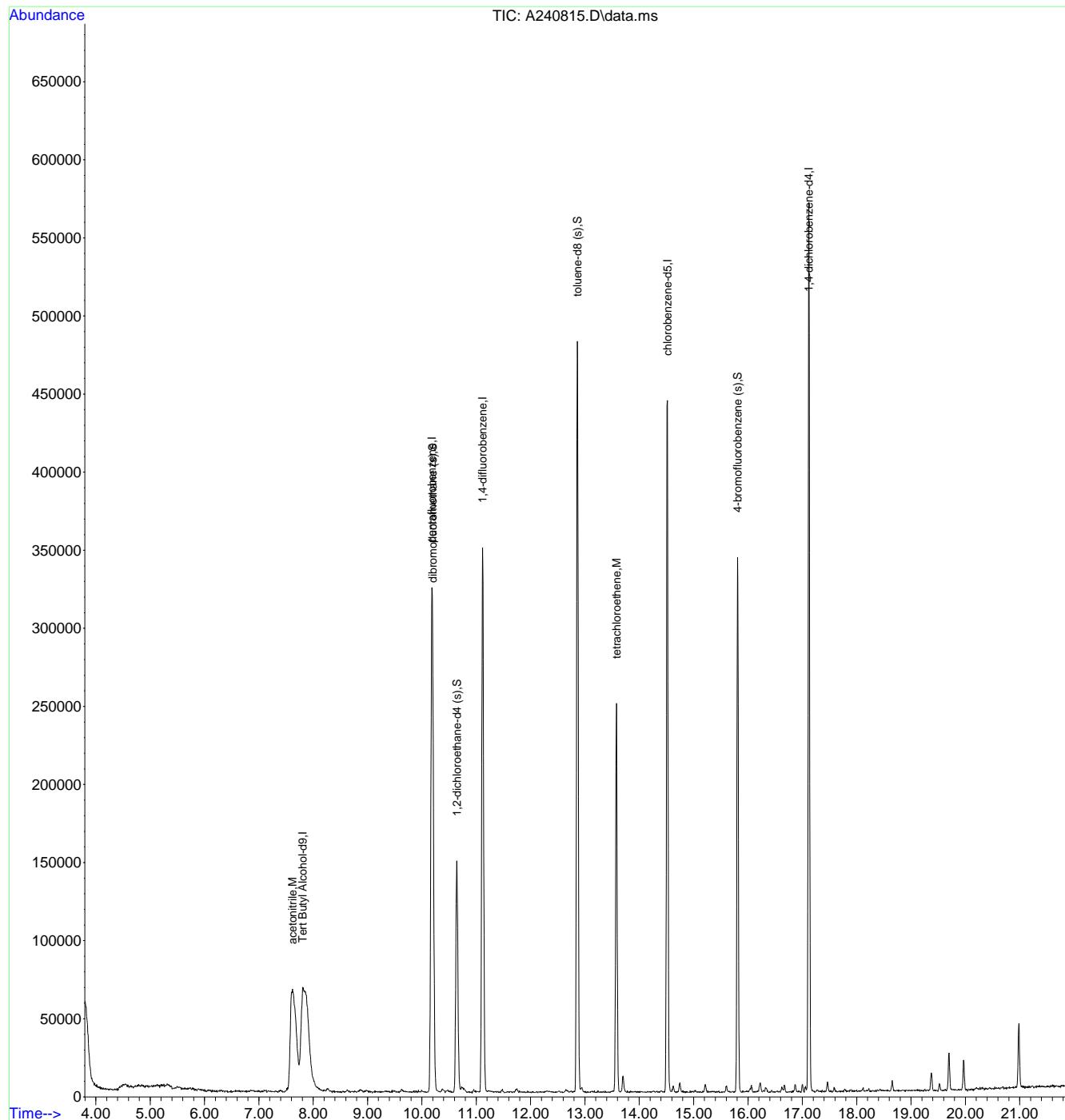
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	7.806	65	374470	500.00	ug/L	0.00
5) pentafluorobenzene	10.180	168	252557	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.117	114	371084	50.00	ug/L	0.00
76) chlorobenzene-d5	14.516	117	280113	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.121	152	165033	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.201	113	127013	50.46	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	100.92%	
55) 1,2-dichloroethane-d4 (s)	10.641	65	134883	51.03	ug/L	0.00
Spiked Amount 50.000 Range 81 - 124			Recovery	=	102.06%	
77) toluene-d8 (s)	12.858	98	377473	50.43	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	100.86%	
101) 4-bromofluorobenzene (s)	15.808	95	127957	47.60	ug/L	0.00
Spiked Amount 50.000 Range 80 - 120			Recovery	=	95.20%	
<hr/>						
Target Compounds						
22) acetonitrile	7.618	41	289084	478.61	ug/L	98
83) tetrachloroethene	13.580	166	86497	46.41	ug/L	97
<hr/>						

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\VA9165\
 Data File : A240815.D
 Acq On : 4 Apr 2018 12:09 am
 Operator : JessicaP
 Sample : icv9165-50
 Misc : MS25128,VA9165,5,,,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 05 12:22:06 2018
 Quant Method : C:\msdchem\1\METHODS\MA9165.M
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Thu Apr 05 12:19:04 2018
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
<hr/>						
Internal Standards						
1) Tert Butyl Alcohol-d9	7.795	65	411626	500.00	ug/L	-0.01
5) pentafluorobenzene	10.170	168	259385	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.106	114	381142	50.00	ug/L	0.00
76) chlorobenzene-d5	14.511	117	347164	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.110	152	204541	50.00	ug/L	0.00
<hr/>						
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	129936	50.26	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 100.52%		
55) 1,2-dichloroethane-d4 (s)	10.630	65	131069	48.27	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	= 96.54%		
77) toluene-d8 (s)	12.853	98	421669	45.46	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 90.92%		
101) 4-bromofluorobenzene (s)	15.802	95	157327	47.22	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	= 94.44%		
<hr/>						
Target Compounds						
3) tertiary butyl alcohol	7.921	59	76779	105.27	ug/L	94
4) 1,4-dioxane	11.843	88	23112	503.84	ug/L	93
6) chlorodifluoromethane	4.212	51	69818	17.47	ug/L	93
7) dichlorodifluoromethane	4.191	85	99706	22.78	ug/L	94
10) chloromethane	4.531	50	102737	20.58	ug/L	99
11) vinyl chloride	4.830	62	124164	24.15	ug/L	97
13) bromomethane	5.509	94	73325	25.34	ug/L	98
14) chloroethane	5.708	64	57364	24.56	ug/L	96
15) vinyl bromide	6.090	106	76286	29.04	ug/L	100
16) trichlorofluoromethane	6.236	101	98970	24.19	ug/L	96
18) acrolein	6.901	56	15093	19.44	ug/L	96
19) freon 113	7.110	151	53380	26.26	ug/L	98
20) 1,1-dichloroethene	7.099	96	53695	22.32	ug/L	94
21) acetone	7.141	58	26816	69.28	ug/L	# 84
22) acetonitrile	7.591	41	112472	181.31	ug/L	95
25) methylene chloride	7.847	84	60092	21.65	ug/L	92
26) methyl acetate	7.638	43	46308	16.12	ug/L	95
28) trans-1,2-dichloroethene	8.255	96	50755	21.06	ug/L	92
29) hexane	8.616	57	59869	17.30	ug/L	97
30) di-isopropyl ether	8.872	45	169831	18.41	ug/L	79
31) ethyl tert-butyl ether	9.359	59	181977	21.79	ug/L	99
32) 2-butanone	9.579	72	31511	76.10	ug/L	# 73
33) 1,1-dichloroethane	8.846	63	90889	19.13	ug/L	99
34) chloroprene	8.972	53	67121	18.42	ug/L	95
36) vinyl acetate	8.846	86	9447	19.68	ug/L	# 49
37) ethyl acetate	9.605	45	9244	17.67	ug/L	# 42
38) 2,2-dichloropropane	9.636	77	93665	23.00	ug/L	96
39) cis-1,2-dichloroethene	9.610	96	57371	20.72	ug/L	97
42) bromochloromethane	9.929	128	28588	18.89	ug/L	# 84
44) chloroform	9.986	83	86089	19.99	ug/L	98
45) tert-butyl formate	10.054	59	59099	22.30	ug/L	97
48) cyclohexane	10.374	84	88262	22.11	ug/L	94
49) 1,1,1-trichloroethane	10.274	97	90943	23.38	ug/L	96
50) iso-butyl alcohol	10.436	43	46906	192.97	ug/L	95
51) 1,1-dichloropropene	10.457	75	63217	19.50	ug/L	98
52) carbon tetrachloride	10.494	117	78109	23.40	ug/L	99
53) tert-amyl alcohol	10.588	73	37288	105.81	ug/L	94
56) benzene	10.729	78	188600	19.72	ug/L	99
57) iso-octane	10.776	57	189492	20.15	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
58) tert-amyl methyl ether	10.787	73	180087	21.64	ug/L	100
59) heptane	10.944	71	34626	19.25	ug/L	96
60) isopropyl acetate	10.656	87	12640	21.37	ug/L	# 76
61) 1,2-dichloroethane	10.724	62	59694	19.71	ug/L	97
62) n-butyl alcohol	11.205	56	152515	1031.93	ug/L	93
63) ethyl acrylate	11.467	55	60187	18.34	ug/L	96
64) trichloroethene	11.461	95	43880	20.32	ug/L	97
66) methylcyclohexane	11.723	83	101064	20.92	ug/L	95
67) 2-chloroethyl vinyl ether	12.293	63	141047	99.46	ug/L	98
69) 1,2-dichloropropane	11.733	63	48034	18.85	ug/L	93
70) dibromomethane	11.885	93	30985	21.32	ug/L	96
71) bromodichloromethane	12.021	83	61409	20.74	ug/L	99
72) epichlorohydrin	12.408	57	32528	90.02	ug/L	98
73) cis-1,3-dichloropropene	12.523	75	72121	20.24	ug/L	95
74) 4-methyl-2-pentanone	12.643	58	109788	80.15	ug/L	94
75) 3-methyl-1-butanol	12.638	55	103950	420.83	ug/L	94
78) toluene	12.931	92	106886	18.22	ug/L	96
79) trans-1,3-dichloropropene	13.119	75	63976	19.64	ug/L	97
81) 1,1,2-trichloroethane	13.355	83	34585	19.63	ug/L	96
82) 2-hexanone	13.564	58	100071	79.28	ug/L	95
83) tetrachloroethene	13.574	166	47095	20.39	ug/L	95
84) 1,3-dichloropropane	13.559	76	66602	19.48	ug/L	98
85) butyl acetate	13.653	56	36753	17.88	ug/L	92
87) dibromochloromethane	13.841	129	48560	20.65	ug/L	96
88) 1,2-dibromoethane	14.014	107	45263	21.76	ug/L	98
89) n-butyl ether	14.479	57	199647	18.59	ug/L	96
90) chlorobenzene	14.542	112	117307	20.61	ug/L	97
91) 1,1,1,2-tetrachloroethane	14.605	131	55032	20.05	ug/L	98
92) ethylbenzene	14.615	91	202650	19.70	ug/L	99
93) m,p-xylene	14.735	106	160380	41.15	ug/L	98
94) o-xylene	15.201	106	86741	20.48	ug/L	97
95) styrene	15.206	104	131454	20.90	ug/L	97
96) butyl acrylate	15.007	55	95756	19.23	ug/L	99
97) bromoform	15.478	173	34877	22.98	ug/L	98
98) isopropylbenzene	15.593	105	238691	20.68	ug/L	100
99) cis-1,4-dichloro-2-butene	15.640	75	22126	19.21	ug/L	97
102) bromobenzene	16.022	156	53893	19.83	ug/L	98
103) 1,1,2,2-tetrachloroethane	15.897	83	75382	19.14	ug/L	97
105) 1,2,3-trichloropropane	15.991	110	19623	20.94	ug/L	93
106) n-propylbenzene	16.053	91	261927	18.79	ug/L	99
107) 2-chlorotoluene	16.205	126	55932	19.64	ug/L	100
108) 4-chlorotoluene	16.315	91	145060	19.73	ug/L	96
110) 1,3,5-trimethylbenzene	16.221	105	199655	18.42	ug/L	99
111) tert-butylbenzene	16.618	134	41222	18.65	ug/L	97
112) 1,2,4-trimethylbenzene	16.660	105	197025	18.64	ug/L	98
113) sec-butylbenzene	16.859	105	270596	19.16	ug/L	98
114) 1,3-dichlorobenzene	17.047	146	105467	20.29	ug/L	97
115) p-isopropyltoluene	16.990	119	227320	19.43	ug/L	98
116) 1,4-dichlorobenzene	17.141	146	108267	20.50	ug/L	97
117) 1,2-dichlorobenzene	17.575	146	110339	19.40	ug/L	98
119) n-butylbenzene	17.455	92	117138	19.06	ug/L	97
121) 1,2-dibromo-3-chloropr...	18.423	157	21029	19.78	ug/L	93
122) 1,3,5-trichlorobenzene	18.642	180	102815	19.10	ug/L	99
123) 2-ethylhexyl acrylate	19.354	70	11442	2.81	ug/L	98
124) 1,2,4-trichlorobenzene	19.364	180	90555	19.40	ug/L	97
125) hexachlorobutadiene	19.516	225	40215	20.57	ug/L	95
126) naphthalene	19.688	128	232357	19.63	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\
 Data File : a241495.d
 Acq On : 8 May 2018 6:46 am
 Operator : jessicap
 Sample : cc9165-20 Inst : MSA
 Misc : MS26069,VA9204,5,,,1
 ALS Vial : 2 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 09 03:29:37 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
127) 1,2,3-trichlorobenzene	19.960	180	84095	19.94	ug/L	96
129) 2-methylnaphthalene	20.975	142	39667	8.55	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\janellac\05-09-18\va9204\

Data File : a241495.d

Acq On : 8 May 2018 6:46 am

Operator : jessicap

Sample : cc9165-20

Misc : MS26069,VA9204,5,,,1

ALS Vial : 2 Sample Multiplier: 1

Inst : MSA

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M

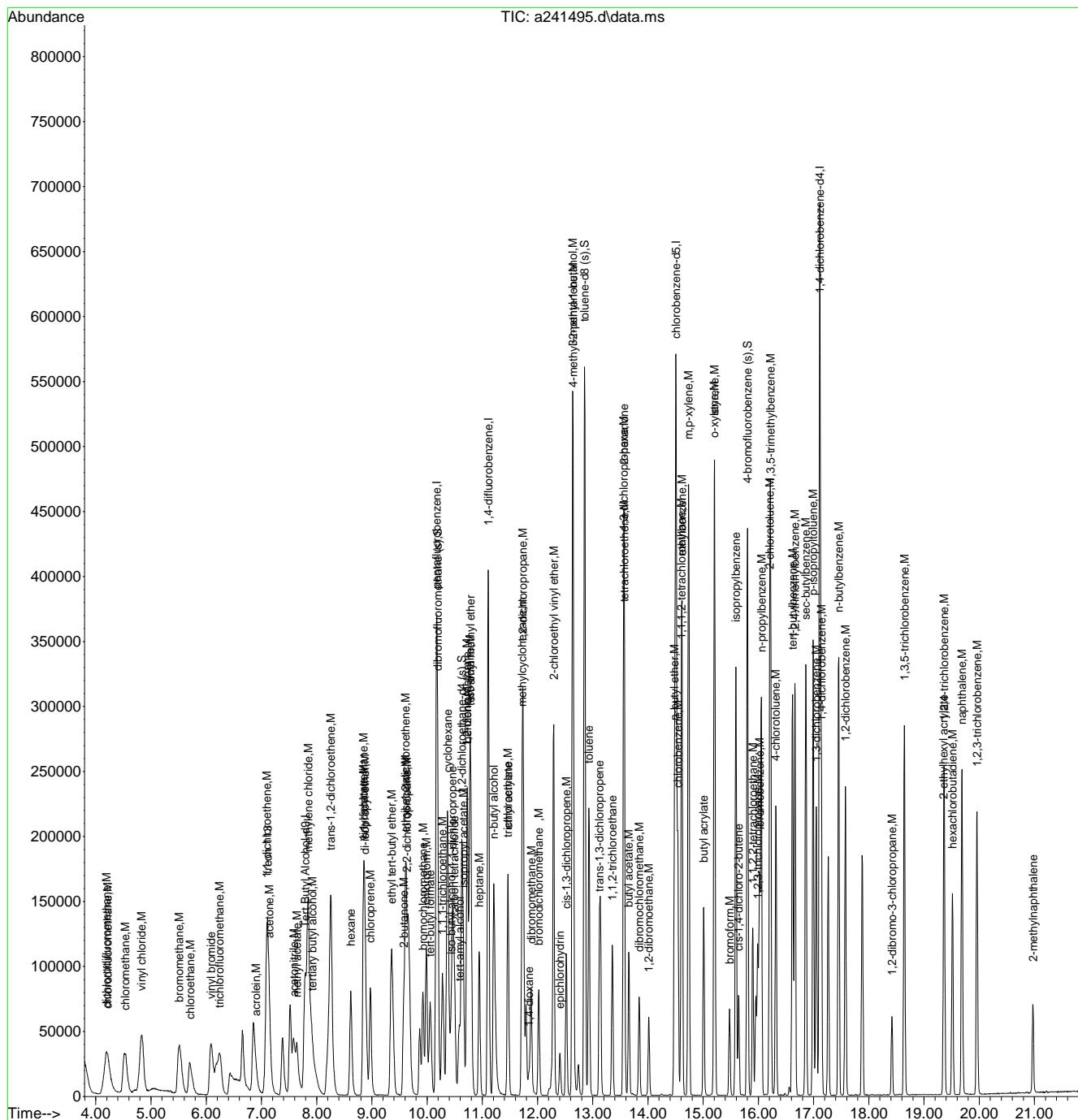
Quant Results File: MA9165.RES

Quant Time: May 09 03:29:37 2018

Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um

QLast Update : Tue Apr 17 15:31:13 2018

Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	7.800	65	257309	500.00	ug/L	0.00
5) pentafluorobenzene	10.169	168	164708	50.00	ug/L	0.00
54) 1,4-difluorobenzene	11.111	114	243533	50.00	ug/L	0.00
76) chlorobenzene-d5	14.510	117	216423	50.00	ug/L	0.00
100) 1,4-dichlorobenzene-d4	17.115	152	126773	50.00	ug/L	0.00
System Monitoring Compounds						
46) dibromofluoromethane (s)	10.190	113	82998	50.56	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	101.12%	
55) 1,2-dichloroethane-d4 (s)	10.630	65	83773	48.29	ug/L	-0.01
Spiked Amount 50.000	Range 81 - 124		Recovery	=	96.58%	
77) toluene-d8 (s)	12.852	98	274165	47.41	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	94.82%	
101) 4-bromofluorobenzene (s)	15.802	95	98618	47.76	ug/L	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery	=	95.52%	
Target Compounds						
3) tertiary butyl alcohol	7.915	59	49186	107.89	ug/L	96
4) 1,4-dioxane	11.848	88	15929	555.51	ug/L	92
6) chlorodifluoromethane	4.191	51	41478	16.34	ug/L	98
7) dichlorodifluoromethane	4.176	85	74945	26.97	ug/L	98
10) chloromethane	4.521	50	69926	22.06	ug/L	99
11) vinyl chloride	4.819	62	79530	24.36	ug/L	97
13) bromomethane	5.509	94	44858	24.41	ug/L	95
14) chloroethane	5.703	64	36149	24.37	ug/L	97
15) vinyl bromide	6.079	106	43789	26.25	ug/L	98
16) trichlorofluoromethane	6.236	101	61450	23.65	ug/L	90
17) ethyl ether	6.660	74	17161	20.23	ug/L	# 84
18) acrolein	6.895	56	7609	15.44	ug/L	95
19) freon 113	7.105	151	31605	24.49	ug/L	99
20) 1,1-dichloroethene	7.094	96	30484	19.95	ug/L	89
21) acetone	7.136	58	16824	68.45	ug/L	96
22) acetonitrile	7.596	41	74933	190.23	ug/L	97
23) iodomethane	7.377	142	51095	16.58	ug/L	99
24) carbon disulfide	7.512	76	104715	17.75	ug/L	96
25) methylene chloride	7.842	84	34906	19.80	ug/L	86
26) methyl acetate	7.643	43	30759	16.86	ug/L	96
27) methyl tert butyl ether	8.234	73	113059	21.41	ug/L	97
28) trans-1,2-dichloroethene	8.250	96	30548	19.96	ug/L	97
29) hexane	8.621	57	37989	17.29	ug/L	95
30) di-isopropyl ether	8.867	45	99509	16.99	ug/L	85
31) ethyl tert-butyl ether	9.353	59	102283	19.29	ug/L	97
32) 2-butanone	9.578	72	19716	74.99	ug/L	# 80
33) 1,1-dichloroethane	8.846	63	55536	18.41	ug/L	97
34) chloroprene	8.972	53	42315	18.29	ug/L	93
35) acrylonitrile	8.187	53	15692	17.40	ug/L	97
36) vinyl acetate	8.846	86	5681	18.64	ug/L	# 48
37) ethyl acetate	9.615	45	5374	16.17	ug/L	# 61
38) 2,2-dichloropropane	9.641	77	52465	20.29	ug/L	96
39) cis-1,2-dichloroethene	9.610	96	34841	19.81	ug/L	96
40) methyl acrylate	9.688	85	5082	16.61	ug/L	99
41) propionitrile	9.667	54	76664	136.28	ug/L	84
42) bromochloromethane	9.924	128	17573	18.29	ug/L	89
43) tetrahydrofuran	9.981	42	14868	15.04	ug/L	94
44) chloroform	9.986	83	52263	19.11	ug/L	98
45) tert-butyl formate	10.054	59	20364	12.10	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
47) methacrylonitrile	9.871	67	15135	18.10	ug/L	83
48) cyclohexane	10.373	84	50488	19.91	ug/L	93
49) 1,1,1-trichloroethane	10.279	97	53386	21.61	ug/L	95
50) iso-butyl alcohol	10.447	43	29068	188.33	ug/L	95
51) 1,1-dichloropropene	10.462	75	39659	19.26	ug/L	98
52) carbon tetrachloride	10.488	117	46188	21.79	ug/L	99
53) tert-amyl alcohol	10.583	73	22514	100.61	ug/L	97
56) benzene	10.729	78	119967	19.64	ug/L	99
57) iso-octane	10.776	57	110920	18.46	ug/L	99
58) tert-amyl methyl ether	10.787	73	103985	19.56	ug/L	97
59) heptane	10.943	71	22709	19.76	ug/L	96
60) isopropyl acetate	10.656	87	8173	21.62	ug/L #	69
61) 1,2-dichloroethane	10.724	62	37009	19.12	ug/L	99
62) n-butyl alcohol	11.210	56	95665	1013.02	ug/L	96
63) ethyl acrylate	11.466	55	36120	17.22	ug/L	96
64) trichloroethylene	11.466	95	28263	20.48	ug/L	97
65) 2-nitropropane	12.256	41	9088	12.27	ug/L #	53
66) methylcyclohexane	11.728	83	62179	20.14	ug/L	96
67) 2-chloroethyl vinyl ether	12.293	63	32542	35.91	ug/L	98
68) methyl methacrylate	11.749	100	8234	19.72	ug/L #	48
69) 1,2-dichloropropane	11.733	63	29929	18.38	ug/L	94
70) dibromomethane	11.880	93	18772	20.21	ug/L	98
71) bromodichloromethane	12.026	83	37937	20.06	ug/L	98
72) epichlorohydrin	12.408	57	19807	85.79	ug/L	99
73) cis-1,3-dichloropropene	12.523	75	43876	19.27	ug/L	95
74) 4-methyl-2-pentanone	12.643	58	71466	81.66	ug/L	93
75) 3-methyl-1-butanol	12.638	55	64229	406.95	ug/L	94
78) toluene	12.931	92	69408	18.98	ug/L	98
79) trans-1,3-dichloropropene	13.119	75	36913	18.18	ug/L	99
80) ethyl methacrylate	13.140	69	38485	18.76	ug/L	96
81) 1,1,2-trichloroethane	13.355	83	21452	19.53	ug/L	95
82) 2-hexanone	13.564	58	60690	77.13	ug/L	92
83) tetrachloroethylene	13.574	166	29766	20.67	ug/L	97
84) 1,3-dichloropropane	13.559	76	39372	18.47	ug/L	98
85) butyl acetate	13.653	56	22181	17.17	ug/L	93
87) dibromochloromethane	13.841	129	28428	19.39	ug/L	98
88) 1,2-dibromoethane	14.019	107	27468	21.18	ug/L	93
89) n-butyl ether	14.484	57	128695	19.22	ug/L	97
90) chlorobenzene	14.542	112	74040	20.87	ug/L	95
91) 1,1,1,2-tetrachloroethane	14.610	131	35332	20.64	ug/L	98
92) ethylbenzene	14.620	91	132723	20.69	ug/L	99
93) m,p-xylene	14.741	106	103484	42.59	ug/L	99
94) o-xylene	15.206	106	58090	22.00	ug/L	99
95) styrene	15.206	104	81939	20.90	ug/L	97
96) butyl acrylate	15.007	55	57538	18.54	ug/L	98
97) bromoform	15.478	173	21121	22.32	ug/L	99
98) isopropylbenzene	15.593	105	155145	21.56	ug/L	99
99) cis-1,4-dichloro-2-butene	15.645	75	11784	16.41	ug/L	98
102) bromobenzene	16.022	156	33302	19.77	ug/L	94
103) 1,1,2,2-tetrachloroethane	15.902	83	46775	19.16	ug/L	99
104) trans-1,4-dichloro-2-b...	15.954	53	8322	17.62	ug/L	95
105) 1,2,3-trichloropropane	15.991	110	11843	20.39	ug/L	95
106) n-propylbenzene	16.053	91	170440	19.73	ug/L	99
107) 2-chlorotoluene	16.210	126	36208	20.51	ug/L	97
108) 4-chlorotoluene	16.320	91	90491	19.85	ug/L	99
110) 1,3,5-trimethylbenzene	16.221	105	131791	19.62	ug/L	97
111) tert-butylbenzene	16.618	134	26317	19.21	ug/L	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
 Data File : a241545.d
 Acq On : 10 May 2018 9:12 am
 Operator : oyinadei
 Sample : CC9165-20 Inst : MSA
 Misc : MS26175,VA9206,5,,,1
 ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
 Quant Results File: MA9165.RES
 Quant Time: May 10 23:02:02 2018
 Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
 QLast Update : Tue Apr 17 15:31:13 2018
 Response via : Initial Calibration

Compound	R.T.	QION	Response	Conc	Units	Dev(Min)
112) 1,2,4-trimethylbenzene	16.665	105	128853	19.66	ug/L	98
113) sec-butylbenzene	16.864	105	175055	19.99	ug/L	99
114) 1,3-dichlorobenzene	17.052	146	65409	20.31	ug/L	96
115) p-isopropyltoluene	16.995	119	147573	20.35	ug/L	99
116) 1,4-dichlorobenzene	17.141	146	66754	20.39	ug/L	99
117) 1,2-dichlorobenzene	17.581	146	69843	19.81	ug/L	97
119) n-butylbenzene	17.455	92	74775	19.63	ug/L	99
121) 1,2-dibromo-3-chloropr...	18.423	157	14853	22.54	ug/L	92
122) 1,3,5-trichlorobenzene	18.647	180	66267	19.86	ug/L	98
123) 2-ethylhexyl acrylate	19.354	70	5473	2.17	ug/L	92
124) 1,2,4-trichlorobenzene	19.369	180	60751	21.00	ug/L	98
125) hexachlorobutadiene	19.521	225	25600	21.13	ug/L	96
126) naphthalene	19.688	128	173692	23.67	ug/L	98
127) 1,2,3-trichlorobenzene	19.960	180	60805	23.26	ug/L	97
128) hexachloroethane	17.884	201	23867	18.84	ug/L	98
129) 2-methylnaphthalene	20.975	142	45267	15.74	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

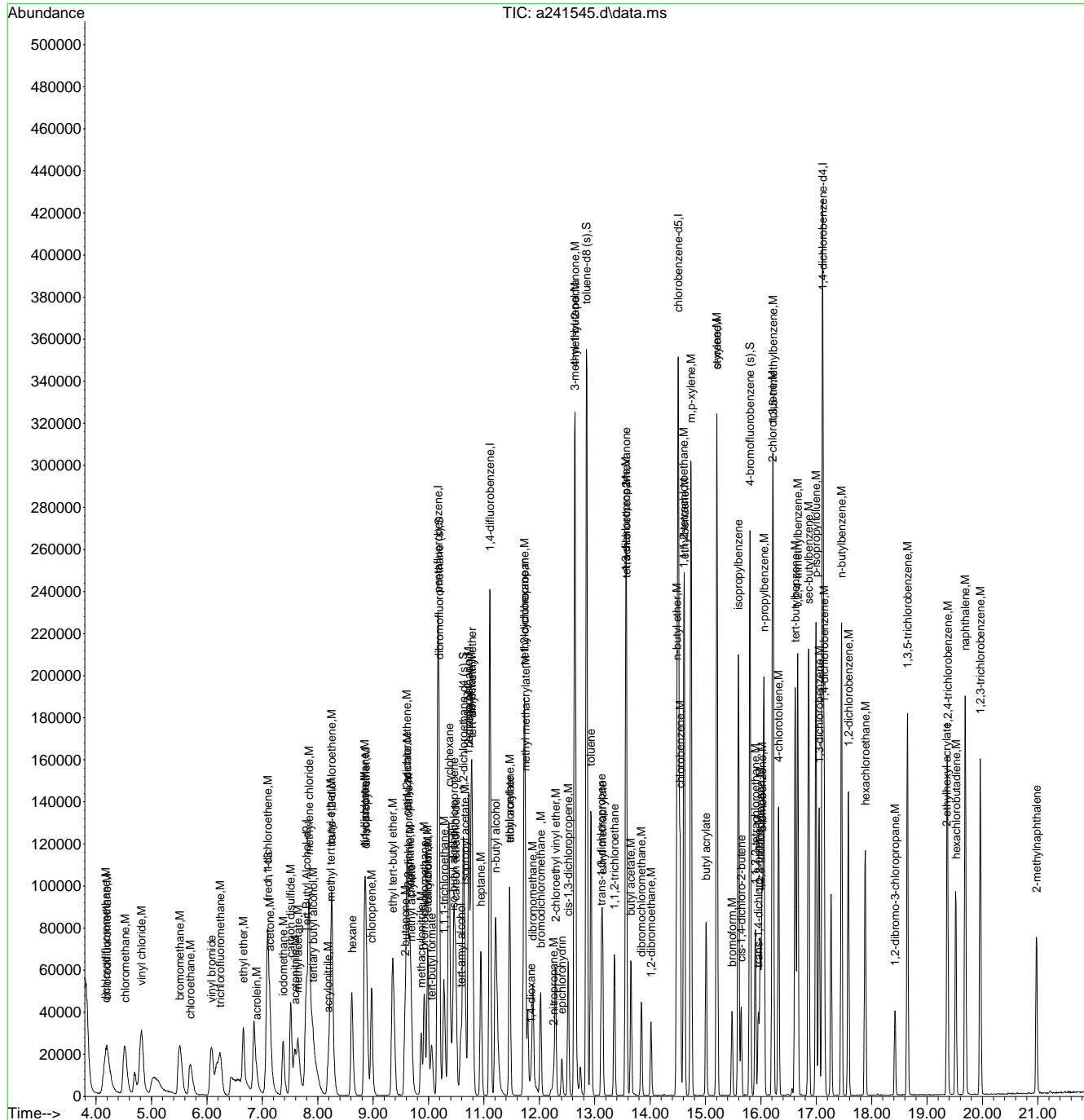
7.6.14

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\kenrickb\va9206\
Data File : a241545.d
Acq On : 10 May 2018 9:12 am
Operator : oyinadei
Sample : CC9165-20 Inst : MSA
Misc : MS26175,VA9206,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\MA9165.M
Quant Results File: MA9165.RES
Quant Time: May 10 23:02:02 2018
Quant Title : SW 846 8260C DB624 60m x 0.25mm x 1.4um
QLast Update : Tue Apr 17 15:31:13 2018
Response via : Initial Calibration



GCMS Volatile Run Log

Standard / Reagents		Lot #		Column
Standards	ABK V018-2615-89.55	C V018-2615-111.13	EK V018-2615-92.48	Method
Standard Concentration	100ppm	100ppm	100ppm	Init Calib Date
External Standards	ABK V018-2615-114.4	C V018-2615-107.5	E V018-2615-115.3	4/3/2018
External Standard Concentration	100ppm	100ppm	PA V018-2615-85.3	
Internal Surrogate	V018-2615-97	100ppm	100ppm	
Internal Surrogate Concentration	50/500ppm			
Initial Calibration Method	MA9165			Sequence loaded by Eddie Huang
pH Paper Lot#	216315			Data processed by dongmei
				VA9165
				AQ
				MOHII
				Approved By:
				4/5/2018 7:03:18 PM
				Approved Date:

Data File	Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 240798	IB	NA			5			1		
A 240799	IB	NA			5			2		
A 240800	BFB	NA			5			3	ok	
A 240801	IC9165-0.2	NA		8260 initial cal	5			4	ok	2uLABK,C,EK/1000mL.
A 240802	IC9165-0.5	NA		8260 initial cal	5			5	ok	5uLABK,C,EK/1000mL.
A 240803	IC9165-1	NA		8260 initial cal	5			6	ok	1uLABK,C,EK/100mL.
A 240804	IC9165-2	NA		8260 initial cal	5			7	ok	2uLABK,C,EK/100mL.
A 240805	IC9165-5	NA		8260 initial cal	5			8	ok	5uLABK,C,EK/100mL.
A 240806	IC9165-10	NA		8260 initial cal	5			9	ok	10uLABK,C,EK/100mL.
A 240807	IC9165-20	NA		8260 initial cal	5			10	ok	20uLABK,C,EK/100mL.
A 240808	ICC9165-50	NA		8260 initial cal	5			11	ok	50uLABK,C,EK/100mL.
A 240809	IC9165-100	NA		8260 initial cal	5			12	ok	100uLABK,C,EK/100mL.

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 240810	IC9165-200		NA		8260 initial cal	5			13	ok	200uLABK,C,EK/100mL.
A 240811	IB		NA			5			14		
A 240812	IB		NA			5			15		
A 240813	ICV9165-50		NA		8260 initial cal	5			16	ok	50uLExtABK,C,E/100mL.
A 240814	ICV9165-50		NA		8260 initial cal	5			17	ok	50uLExtPA/100mL.
A 240815	IB		NA			5			18		

GCMS Volatile Run Log

Standard / Reagents		Lot #		Column			
JC6563-1-1	ABK V018-2615-136.6	C V018-2623-04.6	E V018-2623-03.7		Method		ZB624(60mx0.25mmx1.4um)
Standard Concentration	100ppm	100ppm	100ppm		Init Calib Date		V8260C
Internal Surrogate	V018-2615-149						4/3/2018
Internal Surrogate Concentration	50/1500ppm						
Rough Rview Completed	Jessica Potts 5/8/18.				Analysis Date		5/8/2018
Initial Calibration Method	MA9165				Sequence loaded by		Oyinadei
pH Paper Lot#	216315				Data processed by		janellec
					Batch ID		VA9204
					Matrix		AQ
					Approved By:		OWENM
					Approved Date:		5/21/2018 11:41:17 AM
Data File		Bat	Workgroup #	Purge Vol(ml)	ALS #	Status	Comments
A	241494	IB	NA	5	1	ok	
A	241495	CC9165-20	NA	5	2	ok\ok	20 uL abk,c,e/100mL 6:46am 5/8/18, # 11,13,14,16,19 HIGH.
A	241496	BS	NA	5	3	ok	50uL abk,c,e/100mL
A	241497	IB	NA	5	4	ok	
A	241498	MB	NA	5	5	ok	
A	241499	JC65633-9	3 NA	MS26140 V8260SL	1	6	ok
A	241500	JC65633-9MS	4 NA	MS26140 V8260SL	1	7	ok
A	241501	JC65633-9MSD	7 NA	MS26140 V8260SL	1	8	ok
A	241502	IB	NA				20uL abk,c,e/40mL RR
A	241503	JC65633-1	1 NA	MS26140 V8260SL	5	1	ok
A	241504	JC65633-2	2 10	MS26140 V8260SL	5/50	1	11 ok

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Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A 241505	JC65633-3	1	NA	MS26140	V8260SL	5		1	12	ok	
A 241506	JC65633-4	2	NA	MS26140	V8260SL	5		1	13	ok	
A 241507	JC65633-5	2	NA	MS26140	V8260SL	5		1	14	ok	
A 241508	JC65633-6	2	NA	MS26140	V8260SL	5		1	15	ok	
A 241509	JC65633-7	1	NA	MS26140	V8260SL	5		1	16	ok	
A 241510	JC65633-8	1	NA	MS26140	V8260SL	5		1	17	ok	
A 241511	JC65633-10	1	NA	MS26140	V8260SL	5		1	18	ok	
A 241512	JC65633-11	2	NA	MS26140	V8260SL	5		1	19	ok	
A 241513	JC65633-12	1	NA	MS26140	V8260SL	5		1	20	ok	
A 241514	JC65632-17	2	NA	MS26140	V8260SL	5		1	21	RR	CC (VC) hit
A 241515	JC65632-18	2	NA	MS26140	V8260SL	5		1	22	RR	CC (VC) hit
A 241516	JC65632-19	2	NA	MS26140	V8260SL	5		1	23	ok	(6:17 PM) 5/8/18.

GCMS Volatile Run Log

Standard / Reagents				Lot #					
Standards	ABK V018-2623-05.11	C V018-2623-10.3		E V018-2623-03.7		Method		RX1624 (60m x 0.25mm x 1.4um)	V8260C
Standard Concentration	100-10,000PPM	100PPM		100PPM		Init Calib Date			4/13/2018
Internal Surrogate	V018-2615-149					Rough reviewed by		Eddie Huang (5/10/18)	
Internal Surrogate Concentration	250/2500 ppm					Analysis Date			5/10/2018
						Sequence loaded by		Oyinadei	
						Data processed by		kenrickb	
						Batch ID		VA9206	
						Matrix		AQ	
Initial Cal. Method	MA9165					Approved By:		OWENM	
pH Paper Lot#	216316					Approved Date:		5/21/2018 11:40:00 AM	

Data File	Sample ID	Bot #	Dil	Workgroup #	Test	Purge	ALS	Status	Comments
						Vol (ml)			
A 241541	IB		NA			5		1	ok
A 241542	CC9165-20		NA			5		2	NG
A 241543	CC9165-20		NA			5		3	NG
A 241544	BFB/C/C9165-20		NA			5		4	ok/ok
A 241545	CC9165-20		NA			5		5	ok
A 241546	BS		NA			5		6	ok
A 241547	IB		NA			5		7	ok
A 241548	MB		NA			5		8	ok
A 241549	JC65633-9MS	2	NA	MS26140	V8260SL	5	1	9	ok
A 241550	JC65633-9MSD	6	NA	MS26140	V8260SL	5	1	10	ok
A 241551	IB		NA			5		11	ok

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7.3

Data File		Sample ID	Bot #	Workgroup #	Test	Purge Vol (ml)	CL	pH	ALS #	Status	Comments
A	241552	JC63604-26	NA	MS25705	V8260SL	5			12	ok	5uLABK,C,E/100mL_5ppb MDLV_12:57pm_5/10/18.

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Appendix B

Second Quarter 2018 Effluent Air Laboratory Analytical Reports

6/5/2018

Mr. Peter Hollatz
AECOM Environment
4320 Winfield Road

Warrenville IL 60555

Project Name: UTC SER 9/10

Project #: 60562097
Workorder #: 1805438

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 5/23/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

A Eurofins Lancaster Laboratories Company

WORK ORDER #: 1805438

Work Order Summary

CLIENT: Mr. Peter Hollatz
 AECOM Environment
 4320 Winfield Road
 Warrenville, IL 60555

BILL TO: Accounts Payable Austin
 AECOM
 PO Box 203970
 Austin, TX 78720

PHONE: 630 829-2736 **P.O. #** 74247

FAX: 630-657-6305 **PROJECT #** 60562097 UTC SER 9/10

DATE RECEIVED: 05/23/2018 **CONTACT:** Ausha Scott

DATE COMPLETED: 06/05/2018

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	P1SVE-EFFC1-052118	Modified TO-14A	4.7 "Hg	14.5 psi
02A	P2SVE-EFFC4-052118	Modified TO-14A	6.1 "Hg	15.6 psi
03A	P2SVE-EFFC4-052118-DUP	Modified TO-14A	5.5 "Hg	15 psi
04A	P2SVE-EFFC5-052118	Modified TO-14A	6.1 "Hg	14.6 psi
05A	P1SVE-EFFC2-052118	Modified TO-14A	6.7 "Hg	14.9 psi
06A	P1SVE-EFFC3-052118	Modified TO-14A	5.7 "Hg	14.6 psi
07A	Field Blank-052118	Modified TO-14A	5.5 "Hg	15.3 psi
08A	Lab Blank	Modified TO-14A	NA	NA
09A	CCV	Modified TO-14A	NA	NA
10A	LCS	Modified TO-14A	NA	NA
10AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY:

DATE: 06/05/18

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
Modified TO-14A
AECOM Environment
Workorder# 1805438**

Seven 1 Liter Summa Canister samples were received on May 23, 2018. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

Requirement	TO-14A	ATL Modifications
Initial Calibration criteria	RSD</=30%	Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40% RSD.
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%.
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Sample Drying System	Nafion Dryer	Multibed hydrophobic sorbent
BFB ion abundance criteria	Ion abundance listed in Table 4 of TO-14A	Follow ion abundance criteria listed in Method TO-15

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC1-052118

Lab ID#: 1805438-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	8.0	4.8	32
cis-1,2-Dichloroethene	1.2	1.7	4.7	6.6
1,1,1-Trichloroethane	1.2	36	6.4	200
Trichloroethene	1.2	7.2	6.3	38
Tetrachloroethene	1.2	68	8.0	460

Client Sample ID: P2SVE-EFFC4-052118

Lab ID#: 1805438-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.3	3.0	5.2	12
cis-1,2-Dichloroethene	1.3	2.5	5.1	10
1,1,1-Trichloroethane	1.3	39	7.1	210
Trichloroethene	1.3	9.0	7.0	48
Tetrachloroethene	1.3	45	8.8	310

Client Sample ID: P2SVE-EFFC4-052118-DUP

Lab ID#: 1805438-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	3.2	5.0	13
cis-1,2-Dichloroethene	1.2	2.4	4.9	9.6
1,1,1-Trichloroethane	1.2	40	6.7	220
Trichloroethene	1.2	9.3	6.6	50
Toluene	1.2	1.2	4.6	4.7
Tetrachloroethene	1.2	47	8.4	320

Client Sample ID: P2SVE-EFFC5-052118

Lab ID#: 1805438-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	3.7	5.0	15



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P2SVE-EFFC5-052118**Lab ID#: 1805438-04A**

cis-1,2-Dichloroethene	1.2	2.6	5.0	10
1,1,1-Trichloroethane	1.2	120	6.8	660
Trichloroethene	1.2	2.4	6.7	13
Tetrachloroethene	1.2	7.2	8.5	49

Client Sample ID: P1SVE-EFFC2-052118**Lab ID#: 1805438-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Chloroethane	5.2	9.3	14	25
1,1-Dichloroethene	1.3	2.6	5.1	10
1,1-Dichloroethane	1.3	96	5.2	390
cis-1,2-Dichloroethene	1.3	2.5	5.1	10
1,1,1-Trichloroethane	1.3	160	7.1	900
Trichloroethene	1.3	3.7	7.0	20
Tetrachloroethene	1.3	7.2	8.8	49

Client Sample ID: P1SVE-EFFC3-052118**Lab ID#: 1805438-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	1.2	2.2	5.0	9.0
1,1,1-Trichloroethane	1.2	51	6.7	280
Trichloroethene	1.2	5.9	6.6	32
Tetrachloroethene	1.2	4.8	8.3	33

Client Sample ID: Field Blank-052118**Lab ID#: 1805438-07A**

No Detections Were Found.



Air Toxics

Client Sample ID: P1SVE-EFFC1-052118

Lab ID#: 1805438-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052421	Date of Collection:	5/21/18 8:55:00 AM	
Dil. Factor:	2.36	Date of Analysis:	5/24/18 10:33 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Chloroethane	4.7	Not Detected	12	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	12	Not Detected	28	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
1,1-Dichloroethane	1.2	8.0	4.8	32
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	1.7	4.7	6.6
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	36	6.4	200
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	7.2	6.3	38
Toluene	1.2	Not Detected	4.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	68	8.0	460
Ethyl Benzene	1.2	Not Detected	5.1	Not Detected
m,p-Xylene	1.2	Not Detected	5.1	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC4-052118

Lab ID#: 1805438-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052422	Date of Collection:	5/21/18 9:25:00 AM	
Dil. Factor:	2.59	Date of Analysis:	5/24/18 10:59 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	3.0	5.2	12
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	2.5	5.1	10
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	39	7.1	210
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	9.0	7.0	48
Toluene	1.3	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.1	Not Detected
Tetrachloroethene	1.3	45	8.8	310
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC4-052118-DUP

Lab ID#: 1805438-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052423	Date of Collection:	5/21/18 9:25:00 AM	
Dil. Factor:	2.47	Date of Analysis:	5/24/18 11:25 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Chloroethane	4.9	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	12	Not Detected	29	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
1,1-Dichloroethane	1.2	3.2	5.0	13
2-Butanone (Methyl Ethyl Ketone)	4.9	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	2.4	4.9	9.6
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	40	6.7	220
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	9.3	6.6	50
Toluene	1.2	1.2	4.6	4.7
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	47	8.4	320
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: P2SVE-EFFC5-052118

Lab ID#: 1805438-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052424	Date of Collection:	5/21/18 9:30:00 AM	
Dil. Factor:	2.50	Date of Analysis:	5/24/18 11:51 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Acetone	12	Not Detected	30	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
1,1-Dichloroethane	1.2	3.7	5.0	15
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.2	2.6	5.0	10
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	120	6.8	660
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	2.4	6.7	13
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	7.2	8.5	49
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC2-052118

Lab ID#: 1805438-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052425	Date of Collection:	5/21/18 9:35:00 AM	
Dil. Factor:	2.59	Date of Analysis:	5/25/18 12:18 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Chloroethane	5.2	9.3	14	25
1,1-Dichloroethene	1.3	2.6	5.1	10
Acetone	13	Not Detected	31	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
1,1-Dichloroethane	1.3	96	5.2	390
2-Butanone (Methyl Ethyl Ketone)	5.2	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.3	2.5	5.1	10
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	160	7.1	900
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	3.7	7.0	20
Toluene	1.3	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.1	Not Detected
Tetrachloroethene	1.3	7.2	8.8	49
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: P1SVE-EFFC3-052118

Lab ID#: 1805438-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052426	Date of Collection:	5/21/18 10:00:00 AM	
Dil. Factor:	2.46	Date of Analysis:	5/25/18 12:44 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Chloroethane	4.9	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	12	Not Detected	29	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
1,1-Dichloroethane	1.2	2.2	5.0	9.0
2-Butanone (Methyl Ethyl Ketone)	4.9	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	51	6.7	280
Carbon Tetrachloride	1.2	Not Detected	7.7	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	5.9	6.6	32
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	4.8	8.3	33
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	1.2	Not Detected	5.3	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: Field Blank-052118

Lab ID#: 1805438-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052429	Date of Collection:	5/21/18 10:10:00 AM	
Dil. Factor:	2.50	Date of Analysis:	5/25/18 02:03 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
Chloroethane	5.0	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Acetone	12	Not Detected	30	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.0	Not Detected	15	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	5.0	Not Detected
Chloroform	1.2	Not Detected	6.1	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.9	Not Detected
Benzene	1.2	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.7	Not Detected
Toluene	1.2	Not Detected	4.7	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.8	Not Detected
Tetrachloroethene	1.2	Not Detected	8.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1805438-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052406	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 5/24/18 11:45 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1805438-09A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052402	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/24/18 09:39 AM

Compound	%Recovery
Vinyl Chloride	101
Chloroethane	95
1,1-Dichloroethene	99
Acetone	96
Methylene Chloride	94
trans-1,2-Dichloroethene	102
1,1-Dichloroethane	99
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	102
Chloroform	100
1,1,1-Trichloroethane	100
Carbon Tetrachloride	106
Benzene	107
1,2-Dichloroethane	101
Trichloroethene	98
Toluene	106
1,1,2-Trichloroethane	100
Tetrachloroethene	105
Ethyl Benzene	116
m,p-Xylene	120
o-Xylene	118

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	110	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1805438-10A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/24/18 10:04 AM

Compound	%Recovery	Method Limits
Vinyl Chloride	107	70-130
Chloroethane	100	70-130
1,1-Dichloroethene	100	70-130
Acetone	96	70-130
Methylene Chloride	96	70-130
trans-1,2-Dichloroethene	110	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	101	70-130
cis-1,2-Dichloroethene	89	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	98	70-130
Carbon Tetrachloride	104	70-130
Benzene	105	70-130
1,2-Dichloroethane	95	70-130
Trichloroethene	98	70-130
Toluene	104	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	103	70-130
Ethyl Benzene	114	70-130
m,p-Xylene	117	70-130
o-Xylene	118	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1805438-10AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	p052404	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/24/18 10:30 AM
Compound	%Recovery	Method	Limits
Vinyl Chloride	117	70-130	
Chloroethane	101	70-130	
1,1-Dichloroethene	103	70-130	
Acetone	98	70-130	
Methylene Chloride	95	70-130	
trans-1,2-Dichloroethene	110	70-130	
1,1-Dichloroethane	97	70-130	
2-Butanone (Methyl Ethyl Ketone)	105	70-130	
cis-1,2-Dichloroethene	90	70-130	
Chloroform	99	70-130	
1,1,1-Trichloroethane	98	70-130	
Carbon Tetrachloride	106	70-130	
Benzene	104	70-130	
1,2-Dichloroethane	95	70-130	
Trichloroethene	97	70-130	
Toluene	104	70-130	
1,1,2-Trichloroethane	99	70-130	
Tetrachloroethene	100	70-130	
Ethyl Benzene	113	70-130	
m,p-Xylene	116	70-130	
o-Xylene	117	70-130	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method	Limits
1,2-Dichloroethane-d4	97	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	105	70-130	

Appendix C

Second Quarter 2018 Phase1/Phase 2 AS/SVE System Operations Data Sheets

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DAILY DOCUMENTATION SHEET
Control Panel Touch Screen

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Control Panel Touch Screen

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

(MG)
12:16 PM

DATE	3-12-18	3-19-18	3-23-18	5-2-18	5-28-18	6-4-18	6-11-18	6-18-18	6-25-18
TIME	1142	1438	0915	0830	10:50 AM	12:16 PM	1059	0847	1053
OBSERVER'S INITIALS	MG	MG	AJ	AH	KA	MG	MG	MG	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA								
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SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	48000	48171	48261	48264	48434	48603	48769	48935	49105
Inlet Vacuum (-wc)	-94	-93	-94	-92	-92	-92	-84	-92	-92
Pre-Filter Vacuum (-wc)	-67.8	-76.5	-76.1	-74.0	-74.4	-74.4	-67.7	-74.4	-72.9
Post-Filter Vacuum (-wc)	-80	-80	-78	-78	-78	-82	-71	-77	-79
Outlet Pressure (wc)	6.5	6.5	7.0	7.0	7.0	6.5	7.0	6.5	6.0
Outlet Temperature (°F)	140	146	140	140	164	166	150	166	162
Outlet Magnehelic* (in H ₂ O)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Water Level Sight Glass (in)	Ø	Ø	Ø	Ø	0	0	0	0	0

AIR SPARGE (SPRG)

Hours Operation (hrs)	42751	42923	43015	43018	43189	43360	43528	43695	43867
Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	43360	OK	OK	OK

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	42751	42923	43015	43018	43189	43360	43528	43695	43867
Inlet Temperature (°F)	210	215	210	195	222	230	217	228	224
Inlet Pressure (psi)	18	17	17	18	16	16	17.5	16.5	17.5
Outlet Temperature (°F)	102	105	100	96	122	120	110	119	114
Outlet Pressure (psi)	15	14.25	14.0	13.5	16.0	13.0	14.0	13.5	14.0
Outlet Magnehelic* (in H ₂ O)	4.0	4.0	+4.0+	+4.0	3.5	4.0	4.0	3.9	3.9

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	239925	240815	241293	241570	242451	243321	244178	245031	245907
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* Keep plastic pinch valves on tubing to manehelic cause closed except when taking a reading

MONTHLY DOCUMENTATION SHEET
SVE MANIFOLD

2-26-18

DATE	2-12-18	3-23-18	5-21-18	6-22-18	7-26-18					
TIME	1120	0915	0820	1035	0955					
INITIALS	AS	A.H.	A.H.	A.H.	MP					

0950 AH

MAGNEHELIC GAUGE*

CELL 1	SVE-1 (in H ₂ O)	1.0	1.0	1.1	1.2					
	SVE-2 (in H ₂ O)	1.4	1.4	1.5	1.4	1.4				
CELL 2	SVE-3 (in H ₂ O)	1.3	1.3	1.3	1.3	1.8				
	SVE-4 (in H ₂ O)	2.5	2.2	1.8	1.3	2.4				
CELL 3	SVE-5 (in H ₂ O)	0.9	0.9	0.9	1.1	1.1				
	SVE-6 (in H ₂ O)	0.5	0.0	0.0	0.0	0.15				

VACUUM GAUGE

CELL 1	SVE-1 (-wc)	30	32	28	32	30				
	SVE-2 (-wc)	29	30	26	30	30				
CELL 2	SVE-3 (-wc)	20	20	20	20	20				
	SVE-4 (-wc)	18	18	20	20	20				
CELL 3	SVE-5 (-wc)	35	35	35	36	35				
	SVE-6 (-wc)	39	38	38	36	37				

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
AIR SPARGE MANIFOLD

DATE	2-26-18	3-23-18	5-21-18	6-22-18	7-24-18						
TIME	0850	0915	0830	1035	0955						
INITIALS	A.H.	A.H.	A.H.	A.H.	N						

ROTOMETER

		ROTOMETER				
CELL 1	AS-1 (scfm)	19	19	19	19	17.0
	AS-2 (scfm)	20	20	20	20	20.0
	AS-3 (scfm)	20	20	19	19	19.5
	AS-4 (scfm)	18	19	18	18	18.0
	AS-5 (scfm)	20	19	19	19	18.5
CELL 2	AS-6 (scfm)	16.0	16.0	15.5	15.0	15.0
	AS-7 (scfm)	16.0	16.0	15.5	15.0	15.5
	AS-8 (scfm)	21.5	21.0	21.0	21.0	19.5
	AS-9 (scfm)	17.5	18.0	17.0	16.0	15.5
	AS-10 (scfm)	24.0	23.0	24.0	23.0	23.0
CELL 3	AS-11 (scfm)	16.0	16.0	16.5	16.0	15.5
	AS-12 (scfm)	18.5	18.0	18.0	17.5	18.0
	AS-13 (scfm)	16.5	16.5	16.0	15.0	16.0
	AS-14 (scfm)	21.0	21.5	21.0	21.0	20.5
	AS-15 (scfm)	22.0	22.5	22.0	21.5	21.5

PRESSURE GAUGE

		PRESSURE GAUGE								
CELL 1	AS-1 (psi)	12.0	11.0	12.0	11.5	12.5				
	AS-2 (psi)	11.5	11.0	11.5	11.5	12.5				
	AS-3 (psi)	10.5	10.5	11.5	10.0	11.5				
	AS-4 (psi)	12.0	12.5	12.5	12.5	12.5				
	AS-5 (psi)	13.5	12.0	13.5	13.5	13.5				
	AS-6 (psi)	13.0	11.0	13.0	10.0	11.5				
CELL 2	AS-7 (psi)	12.0	13.0	13.0	13.0	13.0				
	AS-8 (psi)	14.0	11.0	11.0	11.0	11.5				
	AS-9 (psi)	14.5	12.5	14.0	11.5	12.5				
	AS-10 (psi)	11.0	12.0	12.0	11.5	12.5				
	AS-11 (psi)	11.0	11.0	11.0	11.0	11.0				
CELL 3	AS-12 (psi)	13.5	14.0	14.0	14.0	14.0				
	AS-13 (psi)	11.0	10.5	11.0	10.5	10.5				
	AS-14 (psi)	14.0	13.5	14.0	12.0	14.0				
	AS-15 (psi)	13.5	12.5	13.0	13.5	13.0				

MONTHLY DOCUMENTATION SHEET
WELL HEAD GAUGES

DATE	6-26-17	7-20-17	9/14/17	10-26-17	11-17-17	1-22-18	2-26-18	3-23-18	5-27-18	6-22-18
TIME	0655	1255	1116	1155	0405	0855	0850	0915	0830	1025
INITIALS	A. LC	A. H	NP	A. H	A. H	A. H	A. H.	A. H.	A. H.	A. H.

CELL 1	AS-1 (psi)	9.79	9.61	9.64	10.74	10.07	9.60	9.50	9.83	9.51	9.68
	AS-2 (psi)	9.70	9.73	9.47	10.44	9.95	9.49	9.35	9.68	9.45	9.70
	AS-3 (psi)	9.92	9.82	9.69	10.56	10.15	9.61	9.60	9.92	9.72	9.92
	AS-4 (psi)	10.10	10.12	9.82	10.20	10.32	9.97	9.79	10.07	9.76	10.07
	AS-5 (psi)	9.97	10.04	9.71	10.67	10.22	10.02	9.68	9.99	9.76	9.94
CELL 2	AS-6 (psi)	9.95	9.87	10.14	10.24	10.05	9.83	9.73	9.79	9.71	9.94
	AS-7 (psi)	10.21	10.15	10.04	10.43	10.13	Frozen	Frozen	10.00	10.00	10.04
	AS-8 (psi)	10.23	10.23	10.11	10.65	10.47	Frozen	Frozen	10.19	10.17	10.20
	AS-9 (psi)	11.37	11.04	11.07	11.23	10.23	11.35	11.00	11.01	11.07	11.10
	AS-10 (psi)	10.36	10.47	10.21	10.64	10.45	10.19	Frozen	10.18	10.15	10.20
CELL 3	AS-11 (psi)	10.04	10.09	10.59	10.29	10.11	9.80	10.58	9.80	9.77	9.92
	AS-12 (psi)	11.32	11.14	11.36	11.22	10.98	10.40	11.70	10.89	10.28	11.26
	AS-13 (psi)	11.25	11.25	11.46	11.22	10.85	10.40	11.15	10.77	10.43	10.70
	AS-14 (psi)	11.10	10.86	11.42	11.08	10.84	10.35	10.52	10.73	10.61	10.87
	AS-15 (psi)	10.01	9.167	10.24	11.43	10.90	10.51	10.73	10.80	10.69	10.94

CELL 1	SVE-1 (in H ₂ O)	6.2	6.2	5.9	6.0	5.9	5.9	6.3	5.7	5.5	6.0
	SVE-2 (in H ₂ O)	8.1	8.2	7.8	8.3	7.9	7.9	8.2	8.2	7.6	9.0
CELL 2	SVE-3 (in H ₂ O)	7.4	7.1	7.3	7.6	7.6	Frozen	Frozen	7.4	7.8	8.1
	SVE-4 (in H ₂ O)	7.2	6.9	7.0	7.5	7.8	7.8	7.7	7.0	7.8	7.6
CELL 3	SVE-5 (in H ₂ O)	10.01	9.97	9.5	10.6	10.5	10.5	10.2	9.7	10.0	12.1
	SVE-6 (in H ₂ O)	7.4	74.	7.8	8.3	7.9	7.2	8.4	7.9	8.2	9.1

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-24-18	6-25-18	6-26-18	6-27-18	6-28-18	6-29-18	6-30-18	7-1-18	7-2-18
TIME	11:15 AM	1042	0933	0734	0809	0744	1034	9:58	0747
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	MG	MG	KA	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	90°F SUNNY	84°F PARTLY CLOUDY	77°F OVERCAST, WET	78°F OVERCAST, DAMP	86°F SUNNY	82°F SUNNY	97°F SUNNY	90°F PARTLY CLOUDY	78°F SUNNY
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ALARMS

Alarm Code	NA	NA	NA	NA	OLA-B201 PNL ALM	VS	NA	NA	NA
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P&ID

PDT-701 SVE (-wc)	0.00	0.01	0.00	0.04	S	0.00	0.00	0.00	0.11
PT-701 SVE (-wc)	-41	-38	-42	-43	T	-40	-40	-43	-41
PT-702 SVE (-wc)	65.3	65.9	66.2	66.2	M	66.1	64.7	64.3	66.3
PT-2201 SPRG (psi)	14.3	13.1	13.9	14.2	D	15.5	13.7	15.6	14.9
P-401 PUMP (cycles)	85	85	85	85	O	85	85	85	85

P&ID2

PDT-801 SVE (-wc)	0.27	0.27	0.30	0.31	E	0.00	0.00	0.00	0.00
PT-801 SVE (-wc)	-185	-183	-189	-193	Z	-52	-54	-56	-49
PT-802 SVE (-wc)	45.0	45.4	45.2	44.8		0.0	0.0	0.0	0.1
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1333	1341	1350	1358		1366	1366	1366	1366

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-24-18	6-25-18	6-26-18	6-27-18	6-28-18	6-29-18	6-30-18	7-1-18	7-2-18
TIME	11:15 AM	1042	0933	0734	0809	0744	1034	9:58	0747
OBSERVER'S INITIALS	EG	MG	MG	MG	MG	MG	MG	KA	MG

HOURS METERS

B-701 SVE (hrs)	18599	18 623	18 646	18 667		18 704	18 731	18754	18 776
C-2201 SPRG (hrs)	17050	17 074	17 097	17 119		17 155	17 182	17205	17 227
C-2202 SPRG (hrs)	18226	18 250	18 272	18 294		18 331	18 358	18381	18 403
B-801 SVE (hrs)	18532	18 555	18 570	18 600	V	18 622	18 622	18622	18 622
C-2301 SPRG (hrs)	18377	18 400	18 423	18 445	X	18 467	18 467	18467	18 467
C-2302 SPRG (hrs)	18376	18 400	18 423	18 445	S	18 467	18 467	18467	18 467

SET POINTS

PAL-701 SVE (wc)	-27	-27	-27	-27	V	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	S	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	100	10.0	10.0	10.0		10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	V	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	G	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	Z	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0		10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40		40	40	40	40
SV-2802 SPRG (min)	20	20	20	20		20	20	20	20
SV-2901 SPRG (min)	20	20	20	20		20	20	20	20
SV-2902 SPRG (min)	20	20	20	20		20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-15-18	6-16-18	6-17-18	6-18-18	6-19-18	6-20-18	6-21-18	6-22-18	6-23-18
TIME	14:11	8:30	6:53 AM	0917	1118	1222	1257	1150	1044
OBSERVER'S INITIALS	MG	KA	DE	MG	MG	MG	MG	AH	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	SUNNY 93°F	SUNNY 85°	OVERCAST 86°F	SUNNY 95°F	OVERCAST, WET 82°F	OVERCAST 80°F	RAIN 72°F	Rain 70°F	SUNNY 80°F
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.00	0.02	0.00	0.00	0.00	0.01	0.02	0.04	0.03
PT-701 SVE (-wc)	-39	-40	-40	-40	-40	-42	-43	-44	-43
PT-702 SVE (-wc)	65.3	66.2	66.1	64.9	66.5	65.5	66.6	66.6	65.4
PT-2201 SPRG (psi)	15.1	14.8	14.6	13.1	13.7	14.7	15.9	14.4	14.3
P-401 PUMP (cycles)	85	85	85	85	85	85	85	85	85

P&ID2

PDT-801 SVE (-wc)	0.46	0.43	0.37	0.38	0.33	0.30	0.32	0.33	0.32
PT-801 SVE (-wc)	-198	-200	-199	-192	-187	-190	-195	-195	-192
PT-802 SVE (-wc)	43.0	43.1	43.7	43.9	44.9	45.6	44.6	44.7	44.9
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1270	1275	1280	1286	1292	1299	1307	1315	1324

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-15-18	6-16-18	6-17-18	6-18-18	6-19-18	6-20-18	6-21-18	6-22-18	6-23-18
TIME	1411	834	6:53AM	0917	1118	1222	1257	1150	1044
OBSERVER'S INITIALS	MG	KA	DE	MG	MG	MG	MG	HT	MG

HOURS METERS

B-701 SVE (hrs)	18386	18405	18427	18453	18479	18504	18529	18552	18575
C-2201 SPRG (hrs)	16838	16856	16878	16905	16931	16956	16980	17003	17026
C-2202 SPRG (hrs)	18013	18032	18054	18080	18106	18131	18156	18179	18202
B-801 SVE (hrs)	18319	18337	18360	18386	18412	18437	18462	18484	18507
C-2301 SPRG (hrs)	18170	18189	18211	18237	18257	18282	18306	18329	18352
C-2302 SPRG (hrs)	18170	18189	18211	18237	18257	18282	18306	18329	18352

SET POINTS

PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-6-18	6-7-18	6-8-18	6-9-18	6-10-18	6-11-18	6-12-18	6-13-18	6-14-18
TIME	1027	02:41PM	0738	0947	10:13AM	10:34AM	1019	1349	1401
OBSERVER'S INITIALS	MG	MG	MG	MG	KG	MG	MG	MG	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLOUDY 82°F	PARTLY CLOUDY 97°F	CLOUDY	OVERCAST WET 76°F	OVERCAST 76°F	OVERCAST	OVERCAST	SUNNY 88°F	OVERCAST 83°F
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ALARMS

Alarm Code	NA	TAH-2601 XCH ALM	NA						
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P&ID

PDT-701 SVE (-wc)	0.03	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.00
PT-701 SVE (-wc)	-37	-37	-36	-38	-41	-41	-41	-39	-39
PT-702 SVE (-wc)	67.6	65.7	67.9	66.2	66.8	66.5	66.8	66.8	67.0
PT-2201 SPRG (psi)	16.3	15.6	16.7	15.8	15.4	15.5	16.1	15.7	15.3
P-401 PUMP (cycles)	85	85	85	85	85	85	85	85	85

P&ID2

PDT-801 SVE (-wc)	0.44	0.41	0.47	0.50	0.46	0.42	0.47	0.44	0.43
PT-801 SVE (-wc)	-184	-183	-182	-190	-196	-192	-195	-186	-188
PT-802 SVE (-wc)	45.1	44.0	45.8	43.9	44.1	43.8	43.6	44.0	44.6
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1230	1234	1236	1240	1243	1248	1253	1259	1264

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-6-18	6-7-18	6-8-18	6-9-18	6-10-18	6-11-18	6-12-18	6-13-18	6-14-18
TIME	1027	1441	0738	0947	10:13AM	1034	1019	1349	1401
OBSERVER'S INITIALS	MG	MG	MG	MG	KJ	MG	MG	MG	MG

HOURS METERS

B-701 SVE (hrs)	18 167	18 195	18 212	18 238	18263	18 287	18 311	18 338	18 362
C-2201 SPRG (hrs)	16 618	16 646	16 663	16 689	166714	16 738	16 762	16 789	16 813
C-2202 SPRG (hrs)	17 794	17 822	17 839	17 865	17889	17 914	17 937	17 965	17 989
B-801 SVE (hrs)	18 099	18 128	18 145	18 171	18195	18 219	18 243	18 271	18 295
C-2301 SPRG (hrs)	17 957	17 985	17 996	18 022	18047	18071	18 095	18 122	18 146
C-2302 SPRG (hrs)	17 957	17 985	17 996	18 022	18046	18071	18 094	18 122	18 146

SET POINTS

PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

6-5-18

DATE	5-28-18	5-29-18	5-30-18	5-31-18	6-1-18	6-2-18	6-3-18	6-4-18	6-4-18	6-4-18
TIME	10:27 AM	10:55 AM	0842	1008	0901	8:45 A	7:18 AM	1208	1237 (16)	1243
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	KA	DE	MG	NA	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	100°F SUNNY	OVERCAST 95°F	RAIN 81°F	SUNNY 88°F	SUNNY 89°F	OVERCAST 78°F	SUNNY 78°F	SUNNY 82°F	SUNNY 90°F
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.0	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
PT-701 SVE (-wc)	-35	-37	-41	-40	-38	-37	-38	-36	-37
PT-702 SVE (-wc)	66.0	66.3	66.8	66.7	66.3	68.1	68.5	67.4	65.9
PT-2201 SPRG (psi)	14.3	13.5	15.6	13.9	16.0	13.4	17.2	16.4	13.6
P-401 PUMP (cycles)	85	85	85	85	85	85	85	85	85

P&ID2

PDT-801 SVE (-wc)	0.45	0.41	0.49	0.42	0.48	0.47	0.47	0.46	0.44
PT-801 SVE (-wc)	-181	-185	-197	-193	-189	-188	-178	-178	-186
PT-802 SVE (-wc)	44.4	44.7	43.6	42.8	43.5	44.4	47.1	46.7	45.0
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1196	1199	1203	1207	1210	1214	1217	1223	1226

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	5-28-18	5-29-18	5-30-18	5-31-18	6-1-18	6-2-18	6-3-18	6-4-18	6-5-18
TIME	10:27 AM	10:55 AM	0842	1008	0901	8:50A	7:18 AM	1208	1243
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	KA	DE	MG	MG

HOURS METERS

B-701 SVE (hrs)	17945	17 980	18002	18 027	18 050	18074	18092	18 121	18145
C-2201 SPRG (hrs)	16407	16431	16453	16 478	16 501	16525	16543	16572	16596
C-2202 SPRG (hrs)	17582	17607	17629	17 654	17 677	17701	17719	17 747	17772
B-801 SVE (hrs)	17888	17912	17934	17 960	17 982	18006	18025	18 053	18078
C-2301 SPRG (hrs)	17769	17777	17792	17 817	17 840	17864	17882	17911	17935
C-2302 SPRG (hrs)	17769	17776	17792	17 817	17 840	17864	17882	17910	17935

SET POINTS

PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-22-18	3-23-18	3-21-18	5-22-18	5-23-18	5-24-18	5-25-18	5-26-18	5-27-18
TIME	1302	0945	1100	1428	0852	1521	1039	8:47	1130
OBSERVER'S INITIALS	MG	HA	HA	MG	MG	MG	MG	KA	MG

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	SUNNY 80°F	Sunny 78°F	Rain 72°F	CLOUDY 86°F	SUNNY 82°F	SUNNY 96°F	SUNNY 92°F	SUNNY 82°F	SUNNY 98°F
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ALARMS

Alarm Code	NA								
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P&ID

PDT-701 SVE (-wc)	0.10	0.13	0.14	0.02	0.07	0.00	0.03	0.00	0.00
PT-701 SVE (-wc)	-30	-32	-35	-35	-33	-35	-37	-38	-38
PT-702 SVE (-wc)	72.2	72.9	70.0	68.4	69.7	67.0	67.3	67.9	65.6
PT-2201 SPRG (psi)	16.0	16.2	17.7	17.5	17.4	16.5	16.5	16.5	16.8
P-401 PUMP (cycles)	82	82	85	85	85	85	85	OFF	85

P&ID2

PDT-801 SVE (-wc)	0.55	0.56	0.44	0.43	0.46	0.40	0.42	0.45	0.46
PT-801 SVE (-wc)	-176	-179	-181	-181	-180	-181	-187	-192	-190
PT-802 SVE (-wc)	46.9	47.3	46.3	45.8	45.2	44.1	43.4	44.1	43.4
PT-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
P-501 PUMP (cycles)	1161	1164	1166	1176	1180	1185	1188	1192	1195

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-22-18	3-23-18	3-24-18	5-22-18	5-23-18	5-24-18	5-25-18	5-26-18	5-27-18
TIME	1302	0945	1100	1428	0852	1521	1039	8:54	1130
OBSERVER'S INITIALS	MG	R-H	R-H	MG	MG	MG	MG	KA	MG

HOURS METERS

B-701 SVE (hrs)	17776	17796	17801	17828	17847	17877	17896	17919	17945
C-2201 SPRG (hrs)	16227	16248	16252	16279	16298	16328	16348	16370	16396
C-2202 SPRG (hrs)	17402	17423	17428	17455	17474	17504	17523	17545	17572
B-801 SVE (hrs)	17708	17729	17734	17761	17779	17810	17829	17851	17878
C-2301 SPRG (hrs)	17593	17614	17618	17645	17664	17694	17714	17736	17762
C-2302 SPRG (hrs)	17593	17613	17618	17645	17664	17694	17713	17736	17762

SET POINTS

PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	3-23-18	5-21-18	5-28-18	6-4-18	6-11-18	6-18-18	6-25-18	7-2-18	7-9-18
TIME	0945	1100	10:16 AM	1238	1225	0924	1110	1102	11:02
OBSERVER'S INITIALS	W.H	W.H	KA	MG	MG	MG	MG	MG	KA

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	NA								
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-701

Pre-Filter Vacuum (-wc)	-32	-30	-30	-30	-30	-32	-34	-32	-35
Post-Filter Vacuum (-wc)	-48	-44	-44	-45	-47	-48	-49	-49	-50
Inlet Magnehelic* (in H ₂ O)	0.6	0.5	0.4	0.40	0.45	0.40	0.40	0.40	0.40
Inlet Vacuum (-wc)	-33.9	-30.4	-31.3	-31.8	-33.5	-34.2	-35.7	-34.6	-37.2

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	13.0	13.0	13.0	13.0	13.0	13.0	13.9	13.9	13.0
Inlet Temperature (°F)	100	110	130	126	125	135	130	130	130
Outlet Pressure (wc)	10	10	10	9	9	8.5	8.5	9.0	10
Outlet Temperature (°F)	86	88	120	102	99	111	102	105	110
Water Level Sight Glass (in)	12"	0	0	0	0	0	0	0	0

AIR SPARGE (SPRG) COMPRESSOR C-2201

Upper Oil Sight Glass (half pt.)	OK							
Lower Oil Sight Glass (half pt.)	OK							

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	17.0	13.5	13.0	17.5	15.5	12.5	14.0	14.5	14.5
Inlet Temperature (°F)	220	20.5	225	230	235	239	240	232	240
Outlet Pressure (psi)	16.0	15.0	15.0	18.0	16.25	14.0	15.0	15.25	15.0
Outlet Temperature (°F)	102	92	120	108	104	114	106	110	112

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

DATE	5-29-18	6-4-18	6-11-18	6-18-18	6-25-18	7-2-18	7-9-18	7-16-18	7-23-18
TIME	10:40 AM	12:27 PM	1113	0900	1103	1052	1052	1022	1007
OBSERVER'S INITIALS	KA	MG	MG	MG	MG	MG	MG	MG	MG

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA	NA	NA	NA	SYSTEM OFF	SYSTEM OFF	SYSTEM OFF	NA
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-801

Pre-Filter Vacuum (-wc)	68	-67	-73	-69	-67	0	0	0	-60
Post-Filter Vacuum (-wc)	75	-73	-79	-76	-73	0	0	0	-66
Inlet Magnehelic* (in H ₂ O)	5.45	0.55	0.55	0.55	0.40	0	0	0	0.40
Inlet Vacuum (-wc)	-73.1	-73.0	-80.2	-76.1	-72.7	0	0	0	-65.5

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	44	45	44	48	45	0	0	0	46
Inlet Temperature (°F)	150	140	140	145	138	76	76	82	137
Outlet Pressure (wc)	2	1.5	1.5	1.5	1.5	0	0	0	1.5
Outlet Temperature (°F)	158	109	100	114	104	75	78	85	102
Water Level Sight Glass (in)	0	10	9	10	4	0	0	0	12

AIR SPARGE (SPRG) COMPRESSOR C-2301

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	13	17	13.75	14.5	14.25	0.5	0.5	1.0	0.5
Inlet Temperature (°F)	250	230	229	242	238	76	80	83	145
Outlet Pressure (psi)	12	15	13.5	13.5	13.5	0.5	1.0	1.5	1.5
Outlet Temperature (°F)	133	122	115	128	120	86	87	91	95

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

DATE	2-9-18	2-12-18	2-19-18	2-26-18	3-05-18	3-12-18	3-19-18	3-22-18	5-21-18
TIME	1020	1405	1408	0910	1349	1157	1449	0935	1045
OBSERVER'S INITIALS	A.L.	AS	MG	A.H.	MG	MG	MG	A.H.	A.H.

SYSTEM LEAKS, EXCESSIVE OR UNFAMILIAR NOISE, MOISTURE, ETC.

Comments and Notes	64°F NA	69°F AS	69°F OVERCAST, FOGGY	79°F Sunny	56°F CLOUDY	76°F PARTLY CLOUDY	76°F SUNNY	78°F Sunny	70°F Rain
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SOIL VAPOR EXTRACTION (SVE) BLOWER B-801

Pre-Filter Vacuum (-wc)	105	94	-72	-72	-72	-72	-71	-72	-70
Post-Filter Vacuum (-wc)	105	99	-79	-79	-78	-78	-78	-80	-75
Inlet Magnehelic* (in H ₂ O)	0.15	0.10	0.60	0.50	0.40	0.525	0.55	0.55	0.45
Inlet Vacuum (-wc)	108.9	95.7	-80.5	-79.7	-80.2	-79.4	-78.4	-80.9	-76.4

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	43	43	45	46	46	46	45	46	46
Inlet Temperature (°F)	125	120	125	125	117	125	126	125	125
Outlet Pressure (wc)	0	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Outlet Temperature (°F)	106	104	102	106	105	106	102	100	92
Water Level Sight Glass (in)	Ø	Ø	12"	9"	14"	4"	11"	6"	Ø"

AIR SPARGE (SPRG) COMPRESSOR C-2301

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	15	17	13.5	13.5	14.5	13.75	13.75	13.5	13.5
Inlet Temperature (°F)	200	200	224	220	217	225	235	230	218
Outlet Pressure (psi)	12.5	14.0	11.5	12.0	13.0	12.25	12.25	12.0	13.5
Outlet Temperature (°F)	116	119	114	118	114	118	115	118	106

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1
SVE MANIFOLD

DATE	9/4/17	10-26-17	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-24-18	6-22-18	7/26/18
TIME	1030	1140	1045	1050	1355	0920	0945	1100	1150	0915
INITIALS	NP	A.H.	R.H.	R.H.	AS	A.H.	A.H.	A.H.	R.H.	NP.

MAGNEHELIC GAUGE*

SVE-15 (in H ₂ O)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVE-14 (in H ₂ O)	1.70	1.70	1.70	1.70	1.75	1.70	1.70	1.65	1.65	1.65
SVE-13 (in H ₂ O)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.25
SVE-11 (in H ₂ O)	0.15	0.10	0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVE-9 (in H ₂ O)	0.35	0.25	0.20	0.15	0.10	0.2	0.2	0.2	0.25	0.30

VACUUM GAUGE

SVE-15 (-wc)	25	30	32	36	36	30	32	28	34	36
SVE-14 (-wc)	27	33	34	30	38	33	32	30	35	38
SVE-13 (-wc)	30	33	35	30	39	33	35	30	37	41
SVE-11 (-wc)	14	18	20	16	37	18	18	14	18	19
SVE-9 (-wc)	25	38	30	27	37	29	30	27	32	35

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 1 UPPER CELL
AIR SPARGE MANIFOLD

DATE	7-20-17	9/4/17	9/4/17	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-21-18	6-22-18	
TIME	1310			1140	10.45	1050	1356	0920	0945	1100	1150
INITIALS	R.H.	NP		A.H.	H.H.	R.H.	AS	R.H.	A.H.	A.H.	

ROTOMETER

UPPER CELL	AS-47 (scfm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	AS-38 (scfm)	11.6	11.5	9.0	7.0	8.0	289.0	9.0	8.0	6.5	8.0
	AS-37 (scfm)	11.6	12.0	20.0	19.6	20.0	22.0	20.0	18.5	19.5	15.0
	AS-23 (scfm)	11.0	13.0	17.0	16.4.0	18.0	20.0	19.0	15.0	14.5	14.0
	AS-24 (scfm)	12.0	14.0	11.0	10.0	11.0	12.5	11.0	10.5	11.0	8.0
	AS-39 (scfm)	12.0	13.5	17.5	17.0	18.0	21.0	18.5	16.5	17.5	14.0
	AS-48 (scfm)	12.0	13.0	11.0	10.0	10.5	13.0	11.0	10.0	11.0	14.0
	AS-52 (scfm)	11.0	12.0	10.0	10.0	10.0	11.5	10.5	10.0	10.5	16.5
	AS-56 (scfm)	11.5	12.0	10.0	10.0	10.0	11.5	10.0	10.0	10.5	8.0
	AS-54 (scfm)	11.6	12.0	10.0	9.0	10.0	11.5	10.0	9.0	10.0	8.0
	AS-58 (scfm)	10.5	11.0	9.5	9.0	10.0	10.5	9.0	9.0	10.0	7.0

PRESSURE GAUGE

UPPER CELL	AS-47 (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	AS-38 (psi)	17.0	18.5	17.5	12.0	16.0	20.0	15.5	17.0	13.0	15.0
	AS-37 (psi)	9.0	9.5	16.0	10.0	9.5	10.0	9.0	9.0	10.5	9.0
	AS-23 (psi)	14.0	14.5	15.5	15.0	15.0	16.5	14.0	15.0	16.5	13.0
	AS-24 (psi)	14.0	14.0	14.0	14.0	13.5	14.0	12.5	13.0	14.5	13.0
	AS-39 (psi)	13.0	13.0	14.0	13.5	13.0	14.0	12.5	13.0	14.0	12.0
	AS-48 (psi)	12.0	12.5	12.0	12.0	12.0	12.0	11.0	11.5	12.0	7.0
	AS-52 (psi)	12.0	12.5	12.0	12.0	11.5	12.0	11.0	11.5	12.0	0.0
	AS-56 (psi)	12.0	12.5	12.0	12.0	11.5	12.0	11.0	11.5	12.0	11.0
	AS-54 (psi)	14.0	15.0	17.5	19.0	14.0	14.5	11.5	13.0	14.0	14.0
	AS-58 (psi)	9.0	12.5	10.5	10.0	8.5	12.0	9.0	10.0	10.0	10.0

MONTHLY DOCUMENTATION SHEET
BUILDING 1 LOWER CELL
AIR SPARGE MANIFOLD

DATE	6/28/18	7/26/18						
TIME	11:50	0915						
INITIALS	A.H	MP						

ROTOMETER

LOWER CELL	AS-49 (scfm)	8.5	8.0					
	AS-44 (scfm)	6.0	7.0					
	AS-31 (scfm)	15.0	16.0					
	AS-32 (scfm)	14.0	14.0					
	AS-45 (scfm)	9.0	9.5					
	AS-51 (scfm)	10.5	10.0					
	AS-55 (scfm)	13.0	13.0					
	AS-53 (scfm)	10.0	10.5					
	AS-59 (scfm)	9.0	9.5					
	AS-57 (scfm)	7.0	8.5					
	AS-50 (scfm)	8.0	8.0					

PRESSURE GAUGE

LOWER CELL	AS-49 (psi)	11.5	11.5					
	AS-44 (psi)	13.5	12.5					
	AS-31 (psi)	12.5	12.0					
	AS-32 (psi)	13.0	12.5					
	AS-45 (psi)	13.5	13.0					
	AS-51 (psi)	12.0	11.5					
	AS-55 (psi)	12.0	11.5					
	AS-53 (psi)	13.0	12.0					
	AS-59 (psi)	12.5	12.0					
	AS-57 (psi)	13.0	12.5					
	AS-50 (psi)	17.5	13.0					

MONTHLY DOCUMENTATION SHEET
BUILDING 1 LOWER CELL
AIR SPARGE MANIFOLD

DATE	7-20-17	9-14-17	10-26-17	11-17-17	1-22-18	2-12-18	2-12-18	2-26-18	3-23-18	5-21-18
TIME	1310			1140	1045	1050	1358	0920	0945	1100
INITIALS	R.H.	M.P.		H.H.	A.H.	A.H.	AS	AS	H.H.	A.H.

ROTOMETER

LOWER CELL	AS-49 (scfm)	9.5	10.0	9.5	9.6	9.5	9.5	10.5	10.0	8.5	10.0
	AS-44 (scfm)	10.0	9.5	9.5	8.6	7.0	9.5	8.5	10.0	9.0	6.0
	AS-31 (scfm)	10.0	10.0	18.0	17.5	19.0	10.0	22.0	19.0	17.0	19.0
	AS-32 (scfm)	11.0	11.0	17.0	16.0	17.0	9.0	19.0	18.0	15.5	17.0
	AS-45 (scfm)	11.0	11.5	11.0	11.0	11.5	10.0	13.0	12.0	10.0	11.5
	AS-51 (scfm)	11.5	13.0	11.5	11.0	12.0	9.5	12.5	13.0	10.5	12.5
	AS-55 (scfm)	14.5	14.0	15.0	14.0	15.0	10.0	17.5	15.0	13.5	15.0
	AS-53 (scfm)	12.5	12.0	12.5	12.0	13.0	10.0	14.0	13.0	11.0	13.0
	AS-59 (scfm)	11.0	11.0	11.0	10.5	11.5	10.0	11.0	5.0	10.0	11.0
	AS-57 (scfm)	12.0	11.5	11.0	11.0	11.0	10.0	11.5	10.0	8.5	11.0
	AS-50 (scfm)	13.5	13.5	11.5	10.0	8.0	10.5	9.0	12.0	10.0	9.0

PRESSURE GAUGE

LOWER CELL	AS-49 (psi)	11.0	11.0	11.0	11.0	11.0		9.5	11.5	11.0	11.0
	AS-44 (psi)	13.0	13.0	13.0	13.0	13.0		9.5	13.5	12.5	13.0
	AS-31 (psi)	10.5	11.0	12.0	12.0	11.5		10.0	12.5	12.0	12.0
	AS-32 (psi)	11.5	12.0	12.0	13.0	12.5		9.0	13.0	12.0	12.5
	AS-45 (psi)	13.0	13.0	13.0	13.0	12.5	(AS)	10.0	13.5	12.5	13.0
	AS-51 (psi)	12.0	12.0	12.0	11.5	11.0		9.5	12.0	11.5	11.5
	AS-55 (psi)	12.6	12.0	12.0	11.5	14.0		10.0	12.0	11.5	11.5
	AS-53 (psi)	12.5	13.0	12.5	12.0	12.0		10.0	13.0	12.0	12.0
	AS-59 (psi)	12.0	12.5	12.0	12.0	12.0		10.0	14.0	12.0	12.0
	AS-57 (psi)	13.0	13.0	13.0	12.5	12.5		10.0	13.5	12.5	13.0
	AS-50 (psi)	13.5	14.0	13.5	13.5	13.5		10.5	14.0	13.0	13.5

MONTHLY DOCUMENTATION SHEET

BUILDING 1

PID MEASUREMENTS

DATE	9/14/17	10-26-17	11-17-17	1-22-18	2-12-18	2.26-18	3-23-18	5-21-18	6-22-18	7-26-18	
TIME	1030	1140	1045	1050	1400	0920	0945	1100	1150	0915	
INITIALS	NP	A-H.	A-L	A-L	AS	A-P	A-L	A-L	A-H.	MP	

MONTHLY DOCUMENTATION SHEET
BUILDING 2
SVE MANIFOLD

DATE	9/14/17	10-26-17	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-21-18	6-22-18	7/26/18
TIME	0950	1225	1035	1045	1410	0910	0935	1045	1140	0855
INITIALS	NP	A.H.	A.H.	A.H.	A.S	A.H.	A.H.	A.H.	A.H.	NP

MAGNEHELIC GAUGE*

SVE-10 (in H ₂ O)	.26	0.50	0.0	0.65	0	0	0	0.35	0.0	0.0
SVE-12 (in H ₂ O)	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0
SVE-8 (in H ₂ O)	.70	1.1	1.4	1.05	2.0 ⁺	1.15	1.30	1.05	1.05	0.5
SVE-7 (in H ₂ O)	.35	0.30	0.45	0.50	0	0.20	0.15	Broken.	Broken.	BROKEN

VACUUM GAUGE

SVE-10 (-wc)	90	87	98	90	94	92	92	95	93	90
SVE-12 (-wc)	55	67	74	65	98	85	100	120	130	130
SVE-8 (-wc)	90	95	108	105	110	105	110	35	47	82
SVE-7 (-wc)	65	60	72	65	68	62	64	65	62	60

ELECTRICAL USAGE

Kilowatts (kwh)	764731.00	848385.80	893949.90	903821.30	—	960605.70	11429.56	16858.40	81015.90	81457.4	1247805.60
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* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET
BUILDING 2 UPPER CELL
AIR SPARGE MANIFOLD

DATE	7-20-17	9/14/17	10-26-17	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-21-18	6-22-18
TIME	1305		1225	1035	1045	1410	0906	0935	1045	1140
INITIALS	A.H.	M	A.H.	A.H.	A.H.	AS	A.H.	A.H.	A.H.	A.H.

ROTOMETER

UPPER CELL	AS-20 (scfm)	12.0	13.5	11.0	10.0	10.5	11.0	10.5	9.5	10.5	10.0
	AS-26 (scfm)	6.5	7.0	6.0	5.0	6.0	7.0	5.5	5.0	6.5	5.5
	AS-16 (scfm)	13.5	15.0	9.0	8.0	9.0	14.0	8.0	7.0	8.5	8.0
	AS-18 (scfm)	7.0	8.0	6.5	7.0	6.0	10.5	6.5	5.5	6.0	5.5
	AS-22 (scfm)	16.0	11.5	17.5	16.0	17.0	18.5	18.5	16.0	17.0	16.0
	AS-28 (scfm)	10.5	12.0	9.0	8.0	9.0	11.0	9.0	7.5	9.0	8.5
	AS-30 (scfm)	14.5	16.0	18.0	17.0	17.0	17.5	18.5	18.5	16.0	15.0
	AS-36 (scfm)	11.5	13.0	18.0	16.0	16.0	18.0	18.5	15.0	16.5	15.0
	AS-42 (scfm)	8.0	9.5	7.0	6.5	7.0	8.5	7.0	6.0	7.0	6.5
	AS-40 (scfm)	15.0	17.0	13.5	12.0	12.5	13.0	13.0	11.0	12.0	11.5
	AS-34 (scfm)	21.5	24.5	19.0	17.0	17.5	20.0	18.5	15.5	17.0	16.0

PRESSURE GAUGE

UPPER CELL	AS-20 (psi)	11.0	12.0	11.0	11.0	11.5	9.0	10.5	10.5	11.0	11.5
	AS-26 (psi)	12.0	12.0	12.0	11.0	11.5	9.0	11.0	11.0	11.5	11.5
	AS-16 (psi)	12.5	12.0	11.0	10.5	11.0	9.0	10.5	10.5	11.0	11.0
	AS-18 (psi)	15.5	16.0	15.0	14.0	15.0	10.5	14.0	13.5	14.5	15.0
	AS-22 (psi)	11.5	12.0	12.5	12.0	12.0	9.0	11.5	11.0	12.0	12.5
	AS-28 (psi)	12.0	12.5	12.0	11.5	12.0	9.5	11.5	11.5	12.0	12.5
	AS-30 (psi)	12.0	12.5	12.0	11.5	12.0	9.0	11.0	11.0	12.0	12.5
	AS-36 (psi)	13.0	14.0	14.0	13.0	14.0	10.5	13.0	13.0	14.0	14.0
	AS-42 (psi)	12.0	12.5	12.0	11.5	12.0	10.0	11.0	11.0	12.0	12.0
	AS-40 (psi)	12.0	13.0	12.0	11.5	12.0	9.5	11.0	11.0	12.0	12.0
	AS-34 (psi)	13.0	13.5	12.5	12.0	12.5	9.5	12.0	11.5	12.5	12.5

MONTHLY DOCUMENTATION SHEET
BUILDING 2 LOWER CELL
AIR SPARGE MANIFOLD

DATE	7-24-17	9/14/17	10-26-15	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-21-18	6-22-18
TIME	1305		1225	1035	1045	1410	0910	0935	1045	1140
INITIALS	A.H.	NP	A.H.	A.H.	A.H.	AS	A.H.	A.H.	A.H.	A.H.

ROTOMETER

LOWER CELL	AS-27 (scfm)	12.0	14.0	12.5	11.0	12.0	14.0	12.0	10.5	12.0	11.0
	AS-25 (scfm)	13.0	14.0	13.5	12.0	14.0	16.5	13.0	11.5	13.0	13.0
	AS-17 (scfm)	11.5	13.5	12.0	11.0	12.0	6.5	11.5	10.0	11.0	11.0
	AS-19 (scfm)	12.0	15.0	13.0	11.5	12.5	15.5	13.0	10.5	12.0	11.0
	AS-21 (scfm)	17.0	20.0	17.5	16.0	18.0	20.0	17.5	15.0	16.5	12.0
	AS-29 (scfm)	8.0	10.0	8.0	7.0	8.0	10.0	8.0	7.5	8.5	7.5
	AS-43 (scfm)	9.0	10.0	9.0	8.0	9.0	10.5	9.0	7.5	8.5	8.5
	AS-46 (scfm)	18.0	21.5	19.0	16.5	17.5	22.0	18.5	15.5	17.5	15.5
	AS-41 (scfm)	10.0	12.5	10.0	9.0	11.0	12.0	10.0	8.5	9.5	10.0
	AS-33 (scfm)	15.0	17.0	15.5	16.0	15.0	17.5	15.0	12.5	14.5	13.0
	AS-35 (scfm)	11.5	13.5	12.0	10.5	11.0	13.5	11.5	10.0	11.0	10.0

PRESSURE GAUGE

LOWER CELL	AS-27 (psi)	12.0	13.0	12.0	12.0	12.0	12.0	11.5	11.5	11.5	12.0
	AS-25 (psi)	12.0	12.5	12.0	11.5	12.0	12.0	11.0	11.0	11.0	12.5
	AS-17 (psi)	12.0	12.5	12.0	11.5	12.0	14.0	11.5	11.0	11.0	12.0
	AS-19 (psi)	13.0	14.0	13.5	13.0	14.0	14.0	13.0	13.0	13.0	14.0
	AS-21 (psi)	12.0	13.0	12.0	12.0	13.0	12.5	11.5	11.5	11.5	13.0
	AS-29 (psi)	12.5	13.5	13.0	12.5	13.0	13.0	12.0	11.5	11.5	13.0
	AS-43 (psi)	11.5	12.0	11.5	11.0	12.0	12.0	11.0	11.0	11.0	12.0
	AS-46 (psi)	12.5	13.5	12.5	12.0	13.0	13.0	12.0	12.0	12.0	13.5
	AS-41 (psi)	11.5	12.0	11.5	11.0	11.5	11.5	11.0	11.0	11.0	11.5
	AS-33 (psi)	12.0	12.5	12.5	11.5	12.0	12.0	11.5	11.0	11.0	12.5
	AS-35 (psi)	12.0	12.5	11.5	11.5	12.0	12.0	11.5	11.0	11.0	12.5

**MONTHLY DOCUMENTATION SHEET
BUILDING 2
PID MEASUREMENTS**

TID MEASUREMENTS											
DATE	9/14/17	10-26-17	11-17-17	1-22-18	2-12-18	2-26-18	3-23-18	5-21-18	6-22-18	7/26/18	
TIME	0950	1225	1035	1045	1410	0910	0935	1045	1140	0855	
INITIALS	NP	A.W.	A.H.	A.H.	AS	A.H.	A.H.	A.H.	A.H.	NP	

Appendix D

Second Quarter 2018 Groundwater Sampling Data Sheets

May 2018 Groundwater Sampling Checklist

Well ID	Depth to Water Level Reading	Date of Water Level Reading	Depth of Intake	Sample Date	Total Depth	Notes
RAMW-01	29.61	5-1-18	38.00	5-3-18	46.00	FBLK02
RAMW-02	29.48		37.00	5-3-18	44.83	Collect MS/MSD02
RAMW-03	29.29		38.00	5-2-18	45.29	HSSE-R-DUP02
RAMW-04	29.11		41.00	5-2-18	44.80	EABLK02
RAMW-05	27.99		36.00	5-2-18	43.71	
RAMW-06	28.02		37.00	5-2-18	44.29	
RAMW-07	32.54		41.00	5-2-18	48.64	
RAMW-08	28.63		37.00	5-2-18	44.29	
GMZ-01	32.09		40.00	5-1-18	47.82	
GMZ-02	29.61		37.00	5-2-18	44.79	Collect MS/MSD01
GMZ-03	29.00		37.00	5-2-18	44.60	HSSE-R-DUP01
GMZ-04	27.22		38.00	5-2-18	44.98	
MW-07FGA	27.23		39.00	5-1-18	46.26	
MW-203	27.97		40.00	5-1-18	49.40	
PMW-01	29.73		37.00	5-3-18	44.25	
PMW-02	29.72		37.00	5-3-18	44.95	EABLK01
SMW-01	30.17		32.00	5-1-18	39.24	
SMW-02	26.52		32.00	5-1-18	39.69	
SMW-04	29.30		35.00	5-3-18	42.35	
SMW-08	29.61		34.00	5-1-18	41.93	FBLK01
SMW-19	28.20		35.00	5-2-18	41.09	
SMW-20	28.41		33.00	5-2-18	40.02	
SMW-21	27.90		34.00	5-2-18	41.39	
BGW-01	28.08		N/A	N/A	—	Not Sampled
BGW-02	28.48	↓	N/A	N/A	—	Not Sampled
BGW-03	—	—	N/A	N/A	—	Not Sampled Covered by truck

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/1/2018 Time: Start 1310 (24hr)
Project No: 60562097-4213 Finish 1450
Site Location: Rockford, Illinois
Weather: OVERCAST 70's Windy Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 47.82 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40
 Water table depth (ft): 32.09 Casing type/diameter: 2" PVC Minimum purge volume: 1.7 (gals)
 Water column length (ft): 15.73 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01070
Begin purge at	1335		

(continued on back)

Sample Collector(s):

N. P. ns

Date: 5/1/2018

SAMPLE COLLECTION DATA

Well ID:

GMZ-01

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/2/2018 Time: Start 1445 (24hr)
Project No: 60562097-4213 Finish 1600
Site Location: Rockford, Illinois
Weather: OVERCAST - 70°s Collector(s): N. Pines

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.79 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 29.61 Casing type/diameter: 2" PVC Minimum purge volume: 7.4 (gals)
Water column length (ft): 15.18 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	1450		

Sample Collector(s):

N. P. ns

Date: 5/2/2018

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

GMZ-02

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/2/2018 Time: Start 1215 (24hr)
Project No: 60562097-4213 Finish 1445
Site Location: Rockford, Illinois
Weather: Mostly SUNNY - 70°s Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.62 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 29.00 Casing type/diameter: 2" PVC Minimum purge volume: 7.6 (gals)
Water column length (ft): 15.62
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	<u>B30</u>		

Sample Collector(s):

N. Pins

Date:

5/2/2018

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

GMZ-03

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/2/2018 Time: Start 0905 (24hr)
Project No: 60562097-4213 Finish 1035
Site Location: Rockford, Illinois
Weather: Partly Sunny - 70°s Collector(s): N. Pinus

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.88 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 27.22 Casing type/diameter: 2" PVC Minimum purge volume: 8.6 (gals)
Water column length (ft): 17.66
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	0920		

(continued on back)

Sample Collector(s): N. Sims

Date: 5/2/2018

SAMPLE COLLECTION DATA

Well ID:

GMZ-04

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-1-18 Time: Start 12:55 (24hr)
Project No: 60562097-4213 Finish 13:55
Site Location: Rockford, Illinois
Weather: Cloudy 70-80 °F Collector(s): A. Hollister

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 460.26 Screen interval(ft): 15 Approx. depth of pump intake(ft): 39
 Water table depth (ft): 27.23 Casing type/diameter: 4" SS Minimum purge volume: 37.3 (gals)
 Water column length (ft): 19.03
 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	15D100030
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1245-2312
Begin purge at	1305		

(continued on back)

Sample Collector(s):

Date: 5-1-18

SAMPLE COLLECTION DATA

Well ID:

MW-07FGA

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-1-18 Time: Start 1515 (24hr)
Project No: 60562097-4213 Finish 1610
Site Location: Rockford, Illinois
Weather: Partly Sunny 70-80°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 49.40 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40
Water table depth (ft): 27.97 Casing type/diameter: 2" SS Minimum purge volume: 10.50 (gals)
Water column length (ft): 21.43 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	15D 100030
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1064-0612
Begin purge at	1520		

(continued on back)

Sample Collector(s):

Date: 5-1-18

SAMPLE COLLECTION DATA

Well ID:

MW-203

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/3/2018 Time: Start 0750 (24hr)
Project No: 60562097-4213 Finish 0910
Site Location: Rockford, Illinois
Weather: OVERCAST - 60% Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.25 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37
 Water table depth (ft): 29.73 Casing type/diameter: 2" PVC Minimum purge volume: 7.1 (gals)
 Water column length (ft): 14.52 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01806
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	0805		

(continued on back)

Sample Collector(s):

N. Paus

Date:

SAMPLE COLLECTION DATA

Well ID:

PMW-01

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/3/2018 Time: Start 09:00 (24hr)
Project No: 60562097-4213 Finish 10:35
Site Location: Rockford, Illinois
Weather: OVERCAST - 60°s Collector(s): N. Pines

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.95 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37
Water table depth (ft): 29.72 Casing type/diameter: 2" PVC Minimum purge volume: 7.4 (gals)
Water column length (ft): 15.23
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	0925		

Sample Collector(s):

N. Lewis

Date:

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

PMW-02

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-3-18 Time: Start 0915 (24hr)
Project No: 60562097-4213 Finish 1030
Site Location: Rockford, Illinois
Weather: Partly sunny 68°-75° F Collector(s): R. Hall et al.

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 46.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 28.61 Casing type/diameter: 2" PVC Minimum purge volume: 8.1 (gals)
Water column length (ft): 10.39
(calculations on reverse)

2. WFI PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	150100035
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1064-0612
Begin purge at	0920		

(continued on back)

Sample Collector(s):

Ulla Melh

Date: 5-3-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-01

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-3-18 Time: Start 0755 (24hr)
Project No: 60562097-4213 Finish 0910
Site Location: Rockford, Illinois
Weather: Partly Sunny 60°-70°F Collector(s): A. Hull-13

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.83 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 29.48 Casing type/diameter: 2" PVC Minimum purge volume: 7.50 (gals)
Water column length (ft): 15.35
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	15D100030
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	10104-0612
Begin purge at	0800		

(continued on back)

Sample Collector(s):

Date: 5-3-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-02

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: Start 1410 (24hr)
Project No: 60562097-4213 Finish 1515
Site Location: Rockford, Illinois
Weather: Sunny 80-90° F Collector(s): A-111 Katz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 45.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
 Water table depth (ft): 29.29 Casing type/diameter: 2" PVC Minimum purge volume: 7.9 (gals)
 Water column length (ft): 16.00 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	150100036
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1064-0612
Begin purge at	1415		

(continued on back)

Sample Collector(s):

Date: 5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-03

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: Start 1310 (24hr)
Project No: 60562097-4213 Finish 1405
Site Location: Rockford, Illinois
Weather: Sunny 80-90°F Collector(s): R, L, H, T

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.80 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
 Water table depth (ft): 29.11 Casing type/diameter: 2" PVC Minimum purge volume: 7.7 (gals)
 Water column length (ft): 15.69
 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	15D100036
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1064-0162
Begin purge at	13:15		

(continued on back)

Sample Collector(s):

Date: 5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-04

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: Start 1205 (24hr)
Project No: 60562097-4213 Finish 1300
Site Location: Rockford, Illinois
Weather: Sunny 80-90°F Collector(s): A. Hellat z

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 43.71 Screen interval(ft): 15 Approx. depth of pump intake(ft): 36
Water table depth (ft): 27.99 Casing type/diameter: 2" PVC Minimum purge volume: 7,7 (gals)
Water column length (ft): 15.72 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	150100036
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1044-0612
Begin purge at	1210		

(continued on back)

Sample Collector(s):

Date: 5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-05

Page 2 of 2

VOCs - Volatile organic compounds

- G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: 1030 (24hr)
Project No: 60562097-4213 Finish 1130
Site Location: Rockford, Illinois
Weather: Sunny 70-80°F Collector(s): A. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 28.02 Casing type/diameter: 2" PVC Minimum purge volume: 8.0 (gals)
Water column length (ft): 16.27
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	150100030
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	10604-0612
Begin purge at	1035		

(continued on back)

Sample Collector(s):

Allen McLeod

Date: 5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-06

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: Start 0905 (24hr)
Project No: 60562097-4213 Finish 1020
Site Location: Rockford, Illinois
Weather: Sunny 65-75°F Collector(s): R-H11-12

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 48.64 Screen interval(ft): 15 Approx. depth of pump intake(ft): 41
 Water table depth (ft): 32.54 Casing type/diameter: 2" PVC Minimum purge volume: 7.9 (gals)
 Water column length (ft): 16.1 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	150100030
	Lamotte	2020	2072-1312
	Lamotte	Smart 3 Colorimeter	101010612
Begin purge at	0910		

Time (24hr)	Purge Vol. (ml)	Temp. (°C)	pH	Spec. Cond. (µSi/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0920	5000	17.6	6.99	1609	0.1	0.33	28.1	500	32.54	clear/green
0925	7500	17.7	6.99	1606	-13.6	0.40	21.1	500	32.54	
0930	10,000	17.7	6.99	1605	-26.8	0.44	16.2	500	32.54	
0935	12,500	17.7	6.99	1604	-35.0	0.42	12.2	500	32.54	
0940	15,000	17.7	6.99	1595	-36.7	0.39	9.75	500	32.54	
0945	17,500	17.7	6.99	1602	-36.8	0.40	7.22	500	32.54	
0950	20,000	18.0	6.99	1480	-36.9	0.45	5.68	500	32.54	
0955	22,500	17.9	6.99	1597	-36.6	0.46	4.89	500	32.54	
1000	25,000	17.9	6.99	1609	-35.0	0.39	3.52	500	32.54	
1005	27,500	18.1	6.99	1611	-34.9	0.44	2.82	500	32.54	
1010	30,000	18.12	6.98	1632	-35.3	0.35	2.20	500	32.54	cl

* Turbid/hard DO not stable.
* Remove three well volumes, samples collected

(continued on back)

Sample Collector(s):

Date: _____

5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-07

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-2-18 Time: Start 0800 (24hr)
Project No: 60562097-4213 Finish 0900
Site Location: Rockford, Illinois
Weather: Partly Sunny 60-75°F Collector(s): R. Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.29 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 20.63 Casing type/diameter: 2" PVC Minimum purge volume: 7.7 (gals)
Water column length (ft): 15.66 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	150100030
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1064-11611
Begin purge at	0810		

(continued on back)

Sample Collector(s):

Date: 5-2-18

SAMPLE COLLECTION DATA

Well ID:

RAMW-08

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/1/2018 Time: Start 1450 (24hr)
Project No: 60562097-4213 Finish 1600
Site Location: Rockford, Illinois
Weather: OVERCAST - 70°s WINDY Collector(s): N. PINS

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.24 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 30.17 Casing type/diameter: 2" PVC Minimum purge volume: 44 (gals)
Water column length (ft): 9.07 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	F400872
	Lamotte	2020	FAB1886
	Lamotte	Smart 3 Colorimeter	FAB1090
Begin purge at	<u>1510</u>		

Sample Collector(s):

N. pins

(continued on back)

Date: 5/1/2018

SAMPLE COLLECTION DATA

Well ID:

SMW-01

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5-1-18 Time: Start 1400 (24hr)
Project No: 60562097-4213 Finish 1510
Site Location: Rockford, Illinois
Weather: Cloudy 70-80°F Collector(s): A-Hollatz

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 39.69 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 26.52 Casing type/diameter: 2" PVC Minimum purge volume: 615 (gals)
Water column length (ft): 1317 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	15D 1000 30
	Lamotte	2020	2072-1212
	Lamotte	Smart 3 Colorimeter	1245-2312
Begin purge at	<u>1410</u>		

(continued on back)

Sample Collector(s):

Date: 5-1-18

SAMPLE COLLECTION DATA

Well ID:

SMW-02

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/3/2018 Time: Start 1035 (24hr)
Project No: 60562097-4213 Finish 1155
Site Location: Rockford, Illinois
Weather: OVERCAST - 60% Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 42.35 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35
 Water table depth (ft): 29.30 Casing type/diameter: 2" PVC Minimum purge volume: 6.4 (gals)
 Water column length (ft): 13.05 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	1050		

(continued on back)

Sample Collector(s):

N. pins

Date:

5/3/2018

SAMPLE COLLECTION DATA

Well ID:

SMW-04

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/1/2018 Time: Start 1135 (24hr)
Project No: 60562097-4213 Finish 1305
Site Location: Rockford, Illinois
Weather: Mostly Sunny - 70°s Windy Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.93 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34
Water table depth (ft): 29.61 Casing type/diameter: 2" PVC Minimum purge volume: 6.0 (gals)
Water column length (ft): 12.32 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FAD0572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	<u>1155</u>		

(continued on back)

Sample Collector(s):

N. Pius

Date: 5/1/2018

SAMPLE COLLECTION DATA

Well ID:

SMW-08

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: <u>UTAS Plants 1/2 Facility</u>	Date: <u>5/2/2018</u>	Time:	Start <u>0750</u>	(24hr)
Project No: <u>60562097-4213</u>		Finish	<u>0905</u>	
Site Location: <u>Rockford, Illinois</u>				
Weather: <u>OVERTCAST - 70°</u>	Collector(s): <u>N. PINS</u>			

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.69 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35
 Water table depth (ft): 28.20 Casing type/diameter: 2" SS Minimum purge volume: 6,3 (gals)
 Water column length (ft): 12.89
 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	0805		

(continued on back)

Sample Collector(s):

N. pias

Date: 5/2/2018

SAMPLE COLLECTION DATA

Well ID:

SMW-19

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/2/2018 Time: 1210 (24hr)
Project No: 60562097-4213 Start
Site Location: Rockford, Illinois Finish 1315
Weather: PARTLY SUNNY - 70° Collector(s): N. Pins

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 40.02 Screen interval(ft): 15 Approx. depth of pump intake(ft): 33
Water table depth (ft): 28.41 Casing type/diameter: 2" PVC Minimum purge volume: 5.7 (gals)
Water column length (ft): 11.61
(calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quattro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	<u>1220</u>		

(continued on back)

Sample Collector(s): N. Prins

Date: 5/2/2018

SAMPLE COLLECTION DATA

Well ID:

SMW-20

Page 2 of 2

VOCs - Volatile organic compounds

G - Glass

HCl - Hydrchloric acid

Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility Date: 5/2/2018 Time: Start 1035 (24hr)
Project No: 60562097-4213 Finish 1216
Site Location: Rockford, Illinois
Weather: Partly SUNNY - 70°s Collector(s): N. Pines

1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.39 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34
Water table depth (ft): 27.90 Casing type/diameter: 2" PVC Minimum purge volume: 6.6 (gals)
Water column length (ft): 13.49 (calculations on reverse)

2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

Field Testing Equipment Used:	Make	Model	Serial Number(s)
	YSI	Pro Plus Quatro	FA00572
	Lamotte	2020	FA01886
	Lamotte	Smart 3 Colorimeter	FA01090
Begin purge at	<u>110</u>		

Sample Collector(s):

N. pins

Date: 5/2/2018

(continued on back)

SAMPLE COLLECTION DATA

Well ID:

SMW-21

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VOCs - Volatile organic compounds

G - Glass

HCl - Hydrochloric acid

Project Name: UTC HS Faculty 1/2

Project Number: 60562097

Date: 5-1-18

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Quatropro	15D100030	YSI	766717 3-19	4.00 @ 25C	19.9	4.07	4.00	AH1221	
pH 7.00				7661079 3-19		19.6	7.17	7.02	AH1219	Post Cal
pH 10.00				66K760 11-18	10.00 @ 25C	20.6	10.22	10.00	AH1224	Post Cal
Specific Cond.				866211 3-19		19.8	6985	7000	AH16A14	
ORP			✓ Reagent	7708157 E-18	231.2 mV @ 20 C	23.2	300.1	234.2	AH1227	
DO			H2O Saturated Air	—	100% H2O Sat. Air	21.1	96.5	100	AH1213	BP =
Turbidity	LaMotte	2020	2072-1212	—	0 NTU 10 NTU	NA	0.0	0.0	AH1215	
				—		NA	—	—		Post Cal
						NA	10.04	10.01	AH1215	
						NA	—	—		Post Cal

BP = Barometric Pressure (mmHg)

Project Name: UTAS PLANTS 1/2 FACILITY

Project Number: 60562097, 4213

Date: 5/1/2018

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI PRO PLUS QUATRO	FA00572	76C717	3/2019	4.00 @ 25C	18.6	4.01	4.00	(R) 1107	
pH 7.00			76C1079	3/2019		18.2	7.00	7.00	(R) 1104	Post Cal
pH 10.00			661K360	11/2018	10.00 @ 25C	18.8	10.07	10.00	(R) 1110	
Specific Cond.			8GC211	10/2021		18.6	6896	7000	(R) 1101	Post Cal
ORP			7708157	5/2018	mV @ C	18.7	294.1	234.0	(R) 1114	
DO			H2O Saturated Air	X		20.4	109.4	97.2	(R) 1057	BP =
Turbidity	LAMOTTE 2020 we	FA01886	X	X	0 NTU	NA	0.04	0.00	(R) 1115	
						NA		—		Post Cal
						NA	10.03	10.00	(R) 1115	
						NA		—		Post Cal

BP = Barometric Pressure (mmHg)

Project Name: UTC Facility 1/2

Project Number: 60562097

Date: 5-2-18

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI aquatic pro 15D100030		YSI	76C717 3-19	4.00 @ 25C	23.6	4.01	4.00	AH0737	
pH 7.00				76C1079 3-19		23.6	7.01	7.00	AH0735	Post Cal
pH 10.00				66K360 11-18	10.00 @ 25C	23.6	9.94	10.00	AH0739	Post Cal
Specific Cond.				86C211 3-19		23.7	10853	7000	AH0733	
ORP			Reagent	7708157 5-18	7000 $\mu\text{S}/\text{cm}$ @ 25C	23.5	232.5	233.9	AH07410	Post Cal
DO			H2O Saturated Air	—	100% H2O Sat. Air	23.2	103	97.2	AH0731	BP =
Turbidity	Lamotte 2020	2072-1612	—	—	0 NTU	NA	0.0	0.0	AH0730	Post Cal, BP =
					10 NTU	NA	10.01	10.01	AH0730	Post Cal

BP = Barometric Pressure (mmHg)

Project Name: UTAS PLANTS 1/2 FACILITY

Project Number: 60562097.4213

Date: 5/2/2018

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	VSI Pro Plus QUATRO	FAU0572	76C717	3/2019	4.00 @ 25C	22.7	4.07	4.00	① 0739	
pH 7.00			76C1079	3/2019		22.7	7.05	7.00	② 0737	Post Cal
pH 10.00			66K360	11/2018	10.00 @ 25C	22.7	9.95	10.00	③ 0741	
Specific Cond.			86C211	10/2021		22.9	6825	7000	④ 0734	
ORP			7708157	3/2018	____mV @ ____C	22.7	268.1	234.0	⑤ 0745	
DO			H2O Saturated Air	X		23.1	99.9	99.2	⑥ 0730	BP =
Turbidity	LAMOTTE 2020 WE	FA01886	X	X	0 NTU	NA	0.16	0.00	⑦ 0748	
						NA		---		Post Cal
						NA	9.94	10.00	⑧ 0748	
						NA		---		Post Cal

BP = Barometric Pressure (mmHg)

Project Name: VTC plants 1/2 Fac/11/14

Project Number: 600562097

Date: 5-3-18

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Quattro p50	15D100020	YSI	76C 717 3-19	4.00 @ 25C	23.6	4.04	4.00	AH0735	
pH 7.00				76C 1079 3-19	7.00 @ 25C	23.6	7.07	7.00	AH0733	Post Cal
pH 10.00				666C36e6 11-18	10.00 @ 25C	23.5	10.00	10.00	AH0737	Post Cal
Specific Cond.				86C211 3-19	7000 4,000 uS/cm @ 25C 44	23.5	6905	7000	AH0731	
ORP			Reagents	7708157 5-18	234 mV @ 25C	23.5	232.1	234.0	AH0740	Post Cal
DO			H2O Saturated Air	—	100% H2O Sat. Air	23.5	92.9	97.2	AH0729	BP = Post Cal, BP =
Turbidity	LaMotte 2020	2072- P212	—	—	0 NTU	NA	0.0	0.0	AH0730	
					10 NTU	NA	10.04	10.01	AH0730	Post Cal
					NA	—	—	—	—	Post Cal

BP = Barometric Pressure (mmHg)

Project Name: UTTAS PLANTS 1/2 FACILITY

Project Number: 60562097.4213

Date: 5/3/2018

Calibration Form

Parameter	Instrument		Standard		Standard Value @ C	Ambient Temp. C	Initial Value	Adjusted Value	Initials & Time	Comments
	Manf/Model	Serial No.	Manf/Model	SN/Exp. Date						
pH 4.00	YSI Pro Plus QUAT20	FAU0572	76C717	3/2019	4.00 @ 25C	23.5	4.10	4.00	⑩ 0735	
pH 7.00			76C1079	3/2019		23.5	7.02	7.00	⑩ 0733	Post Cal
pH 10.00			661C360	11/2018	10.00 @ 25C	23.7	9.97	10.00	⑩ 0737	
Specific Cond.			88C211	10/2021		23.6	6758	7000	⑩ 0731	
ORP			7708157	5/2018	mV @ C	22.9	219.4	234.0	⑩ 0741	
DO			H2O Saturated Air	X		23.3	97.3	97.2	⑩ 0728	BP =
Turbidity	LAMOTTE 2020 WE	FAU1886	X	X	0 NTU 10 NTU	NA	0.11	0.00	⑩ 0745	
						NA		---		Post Cal
						NA	9.95	10.00	⑩ 0745	
						NA		---		Post Cal

BP = Barometric Pressure (mmHg)

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
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www.sgs.com/ehsusa

PAGE 1 OF 2

FED-EX Tracking #	4357 6345 2409	Bottle Order Control #
SGS Quote #		SGS Job #

Client / Reporting Information		Project Information							Requested Analysis (see TEST CODE sheet)							Matrix Codes							
Company Name <i>AECOM</i>	Project Name: <i>UTAS PLANTS 1/2 FACILITY</i>															DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank							
Street Address <i>4320 WINFIELD RD #300</i>	Street																						
City <i>WAVERLYVILLE IL 60555</i>	State <i>IL</i>																						
Project Contact <i>Peter Hollatz / peter.hollatz@aecom.com</i>	E-mail																						
Phone #	Fax #																						
Sampler(s) Name(s) <i>N. PINS / A. HOLLATZ</i>	Phone #	Project Manager <i>PETER HOLLATZ</i>							Attention:														
Lab Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection			Matrix	# of bottles	Number of preserved bottles						VOCs	LAB USE ONLY								
			Date	Time	Sampled by			HCl	NaOH	HNO3	H2SO4	NONE	DI Water			MEOH	ENCORE						
HSSEIR-FBLK01-050118			5/1/18	1140	NP	GW	3	3						X									
HSSEIR-SMW08-050118			5/1/18	1245	NP	GW	3	3						X									
HSSEIR-MW07FGA-050118			5/1/18	1340	AH	GW	3	3						X									
HSSEIR-GMZ01-050118			5/1/18	1435	NP	GW	3	3						X									
HSSEIR-SMW02-050118			5/1/18	1500	AH	GW	3	3						X									
HSSEIR-SMW01-050118			5/1/18	1545	NP	GW	3	3						X									
HSSEIR-MW203-050118			5/1/18	1555	AH	GW	3	3						X									
HSSEIR-SMW19-050218			5/2/18	0855	NP	GW	3	3						X									
HSSEIR-GMZ04-050218			5/2/18	1015	NP	GW	3	3						X									
HSSEIR-SMW21-050218			5/2/18	1200	NP	GW	3	3						X									
HSSEIR-SMW20-050218			5/2/18	1305	NP	GW	3	3						X									
Turnaround Time (Business days)			Data Deliverable Information							Comments / Special Instructions													
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____			Approved by (SGS Project Manager)/Date: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>							<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> NJ Reduced <input type="checkbox"/> Commercial "C" <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data							NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____ <i>* LIST OF 13 VOCs</i> <i>IV QC</i>						

Emergency & Rush T/A data available via LabLink												Sample inventory is verified upon receipt in the Laboratory											
Sample Custody must be documented below each time samples change possession, including courier delivery.																							
1 Relinquished by Sampler: <i>NIL P- (AECOM)</i>	Date Time: <i>5/3/18 1315</i>	Received By: <i>1</i>	Relinquished By: <i>2</i>			Date Time: <i>2</i>			Received By: <i>2</i>														
2 Relinquished by Sampler: <i>3</i>	Date Time: <i></i>	Received By: <i>3</i>	Relinquished By: <i>4</i>			Date Time: <i>4</i>			Received By: <i>4</i>														
3 Relinquished by: <i>5</i>	Date Time: <i></i>	Received By: <i>5</i>	Custody Seal #			<input type="checkbox"/> Intact	Preserved where applicable			<input type="checkbox"/>	On Ice	Cooler Temp.											



CHAIN OF CUSTODY

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FED-EX Tracking #	<u>4357 6345 2409</u>	Bottle Order Control #
SGS Quote #		SGS Job #

Client / Reporting Information		Project Information							Requested Analysis (see TEST CODE sheet)							Matrix Codes						
Company Name <u>AECOM</u>		Project Name: <u>UTAS PLANTS 1/2 FACILITY</u>																				
Street Address <u>4320 WINFIELD RD #300</u>		Street		Billing Information (if different from Report to)																		
City <u>WILMORENILLE IL</u>	State <u>IL</u>	Zip <u>60555</u>	City <u>ROCKFORD IL</u>						State <u>IL</u>	Company Name												
Project Contact <u>PETER HOLLATZ/peter.hollatz@allcom.com</u>		E-mail	Project # <u>60562097</u>	Street Address																		
Phone #		Fax #	Client Purchase Order #		City		State		Zip													
Sampler(s) Name(s) <u>N. PINS / A. HOLLATZ</u>		Phone #	Project Manager <u>PETER HOLLATZ</u>		Attention:																	
Lab Sample #	Field ID / Point of Collection	Collection			Matrix	# of bottles	Number of preserved bottles							VOCs								
		Date	Time	Sampled by			HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH		ENCORE							
HSSE1R-GM203-050218		5/2/18	1430	NP	GW	3	3															
HSSE1R-GM202-050218		5/2/18	1550	NP	GW	3	3															
HSSE1R-MS01-050218		5/2/18	1550	NP	GW	3	3															
HSSE1R-MSD01-050218		5/2/18	1550	NP	GW	3	3															
HSSE1R-DUP01-050218		5/2/18	0000	NP	GW	3	3															
HSSE1R-PMW01-050318		5/3/18	0900	NP	GW	3	3															
HSSE1R-FBLK01-050318		5/3/18	0915	NP	GW	3	3															
HSSE1R-PMW02-050318		5/3/18	1025	NP	GW	3	3															
HSSE1R-SMW04-050318		5/3/18	1140	NP	GW	3	3															
HSSE1R-TRIP01-050118		5/1/18	-	-	GW	2	2															
Turnaround Time (Business days)		Data Deliverable Information							Comments / Special Instructions													
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____		Approved by (SGS Project Manager)/Date: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>							<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> NJ Reduced <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "C" <input type="checkbox"/> Other _____ <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data							* LIST OF 13 VOC IV QC						

Sample inventory is verified upon receipt in the Laboratory

1 Relinquished by Sampler: <u>Nicole F (AECOM)</u>	Date Time: <u>5/3/18 1315</u>	Received By: <u>1</u>	Relinquished By: <u>2</u>	Date Time:	Received By: <u>2</u>		
3 Relinquished by Sampler:	Date Time:	Received By: <u>3</u>	Relinquished By: <u>4</u>	Date Time:	Received By: <u>4</u>		
5 Relinquished by:	Date Time:	Received By: <u>5</u>	Custody Seal #	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Preserved where applicable <input type="checkbox"/>	On Ice <input type="checkbox"/>	Cooler Temp. <input type="checkbox"/>

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

LAB USE ONLY



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Client / Reporting Information		Project Information								Requested Analysis (see TEST CODE sheet)								Matrix Codes				
Company Name AECOM		Project Name: UTAS PLANTS 1/2 FACILITY																				
Street Address 4320 WINFIELD RD # 300		Street																		DW - Drinking Water		
City WAVERVILLE IL	State 60555	City ROCKFORD IL	State	Billing Information (if different from Report to)																GW - Ground Water		
Project Contact Peter Hollatz	E-mail peter.hollatz@aecom.com	Project # 60562097	Street Address	Company Name																WW - Water		
Phone #	Fax #	Client Purchase Order #	City	State	Zip																	SW - Surface Water
Sampler(s) Name(s) N. PINS / A. Hollatz		Phone #	Project Manager PETER HOLLATZ	Attention:																SO - Soil		
Lab Sample #	Field ID / Point of Collection	Collection			Sampled by	Matrix	# of bottles	Number of preserved bottles								VOCs	SL - Sludge					
		MEOH/DI Vial #	Date	Time				HCl	NaOH	NH3	HF/SD	None	DI Water	MEOH	ENCORE							
	HSSE12-RAMW08-050218	5/2/18	0845	AH	GW	3	3									X						
	HSSE12-RAMW07-050218	5/2/18	1010	AH	GW	3	3									X						
	HSSE12-RAMW06-050218	5/2/18	1110	AH	GW	3	3									X						
	HSSE12-RAMW05-050218	5/2/18	1250	AH	GW	3	3									X						
	HSSE12-EBLIC02-050218	5/2/18	1310	AH	GW	3	3									X						
	HSSE12-RAMW04-050218	5/2/18	1350	AH	GW	3	3									X						
	HSSE12-RAMW03-050218	5/2/18	1500	AH	GW	3	3									X						
	HSSE12-DUP02-050218	5/2/18	0000	AH	GW	3	3									X						
	HSSE12-RAMW02-050318	5/3/18	0855	AH	GW	3	3									X						
	HSSE12-MS02-050318	5/3/18	0855	AH	GW	3	3									X						
	HSSE12-MS002-050318	5/3/18	0855	AH	GW	3	3									X						
Turnaround Time (Business days)										Data Deliverable Information								Comments / Special Instructions				
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> 1 Day RUSH <input type="checkbox"/> other _____										Approved by (SGS Project Manager)/Date: <hr/> <hr/> <hr/> <hr/> <hr/>								<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> NYASP Category A <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> State Forms <input type="checkbox"/> NJ Reduced <input type="checkbox"/> EDD Format _____ <input type="checkbox"/> Commercial "C" <input type="checkbox"/> Other _____ <input type="checkbox"/> NJ Data of Known Quality Protocol Reporting Commercial "A" = Results Only; Commercial "B" = Results + QC Summary NJ Reduced = Results + QC Summary + Partial Raw data				
																		* LIST OF 13 VOCs IV QC				
																		Sample inventory is verified upon receipt in the Laboratory				
Relinquished by Sampler: <u>N. PINS (AECOM)</u> Date Time: <u>5/3/18 1315</u>										Received By: <u>1</u> Relinquished By: <u>2</u>								Date Time: <u>5/3/18 1315</u> Received By: <u>2</u>				
Relinquished by Sampler: <u>3</u> Date Time:										Received By: <u>3</u> Relinquished By: <u>4</u>								Date Time: <u>5/3/18 1315</u> Received By: <u>4</u>				
Relinquished by: <u>5</u> Date Time:										Received By: <u>5</u> Custody Seal # <input type="checkbox"/> Intact <input type="checkbox"/> Not intact								Preserved where applicable <input type="checkbox"/> On Ice <input type="checkbox"/> Cooler Temp. <input type="checkbox"/>				

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Appendix E

Third Quarter 2018 Progress Report



Submitted to:
UTC Aerospace Systems
Rockford, IL

Submitted by:
AECOM
Warrenville, IL
September 2018

QUARTERLY PROGRESS REPORT – Third Quarter 2018 (June 2018 – August 2018)

UTC Aerospace Systems Plants 1/2 Facility
Southeast Rockford Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417, ILD010219665

This Quarterly Progress Report has been prepared on behalf of UTC Aerospace Systems (UTAS, fka Hamilton Sundstrand Corporation or HSC) by AECOM Technical Services, Inc. (AECOM). This report summarizes activities that occurred during the months of June, July and August of the Third Quarter of 2018 at the above-referenced facility.

Progress Report- Reporting Quarters			
Q1	December	January	February
Q2	March	April	May
Q3	June	July	August
Q4	September	October	November

This report is the twenty-third in the series of Quarterly Progress Reports and consistent with United States Environmental Protection Agency (USEPA) approval of combining project reporting documents from a letter dated April 15, 2011. Quarterly Progress Reports are included as attachments to the Groundwater Management Zone (GMZ) Monitoring and System Performances Reports.

This Quarterly Progress Report follows the requirements outlined in Section X of the Consent Decree (CD) and includes the following:

Actions taken during the prior quarter to maintain compliance with the CD include:

- Summaries of sampling results and tests.
- An identification of work plans and other deliverables completed in accordance with the CD.
- Actions scheduled for the next quarter.
- Information on the progress, percentage of completion, delays, and efforts to mitigate delays.
- Modifications to Work Plans and/or schedules.
- Activities undertaken in support of the Community Relations Plan.

Tasks completed during this period to fulfill each of these actions are summarized (by action) below.

Actions Taken During the Third Quarter to Achieve Compliance with the Consent Decree

The following actions were taken during June, July and August of the Third Quarter of 2018:

- On June 13, 2018, AECOM submitted to the Illinois Environmental Protection Agency (IEPA) and the USEPA the First Quarter 2018 GMZ Monitoring and System Performance Report.
- Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system air sampling of the SVE system effluent prior to being deactivated (switched to the pulse-off mode). SVE process air effluent sampling was conducted on July 26, 2018.

- AECOM completed GMZ and performance well quarterly monitoring (third quarter 2018) well network sampling on August 7-9, 2018. The following wells were sampled for volatile organic compounds (VOCs): GMZ wells (which include the Phase 1 AS/SVE performance monitoring network) SMW01, SMW02, SMW04, SMW08, SMW19, SMW20, SMW21, MW07FG, MW203, GMZ01, GMZ02, GMZ03, GMZ04, PMW01 and PMW02; and performance monitoring wells RAMW01 RAMW02, RAMW03, RAMW04, RAMW05, RAMW06, RAMW07, and RAMW08.

Summary of Sampling and Tests

- Three process air samples were collected from the Phase 1 AS/SVE system effluent during the July 26, 2018, sampling event.
- Two process air samples were collected from the Phase 2 AS/SVE system effluent during the July 26, 2018, sampling event.

Work Plans and Other Deliverables Completed In Accordance With the CD

- The *First Quarter 2018 GMZ Monitoring and System Performance Report, Area 9/10 Remedial Action* (June 2018) was submitted in accordance with Section X, paragraph 30, of the CD and consistent with Section V of the Statement of Work (SOW).

Actions Scheduled for Next Quarter

The following actions are scheduled for the next quarter:

- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-off mode (system not in operation) from July 26, 2018, to approximately September 17, 2018.
- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-on mode (system in run mode) from approximately September 17, 2018, until approximately November 19, 2018.
- Completion of the GMZ and performance well fourth quarter monitoring event in December 2018. The monitoring event will include the GMZ monitoring well network (which includes the Phase 1 AS/SVE performance monitoring network) and the Phase 2 AS/SVE performance monitoring network.

Percentage of Completion/Anticipated Delays

There are 39 specific deliverables or activities required to be completed as part of the CD. Some of these are ongoing activities and others, such as submittal of documents, require approval by the USEPA/Illinois Environmental Protection Agency to fulfill the requirements of the CD. To date, UTAS has completed their current obligations for 28 of the 39 items, or 72 percent of the CD requirements. There are currently no anticipated delays to the schedule.

Modifications to Work Plans/Schedules Proposed

None

Activities Undertaken In Support of Community Relations Plan

No activities are required with regard to the Community Relations Plan at this time.